

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

Vol. 60
No. 8

ESTABLISHED 1882

\$4.00 Per Year
Single Copy 15 Cents

POINTERS IN SOUTHERN PROGRESS

The significance of recent progress in the South, including Missouri and Oklahoma, is indicated in the following figures for ten years.

	1900	1910
Agriculture		
Farm lands, value . . .	\$3,233,462,000	\$7,298,383,000
Farm buildings, value	\$855,103,000	\$1,672,700,000
Products, value	\$1,560,000,000	\$2,975,000,000
Manufacturing		
Factory capital	\$1,196,302,000	* \$2,885,084,000
Factory products . . .	\$1,564,184,000	* \$3,160,818,000
Mineral products . . .	\$131,700,000	* \$327,421,000
Lumber cut, feet . . .	14,444,965,000	* 24,460,000,000
Railroads, mileage . . .	61,880	87,084
Exports, value	\$484,644,177	\$678,714,121
National Banks		
Resources	\$705,827,594	\$1,830,095,231
Individual deposits .	\$334,649,670	\$899,203,608

* 1909

Alphabetical Index, Page 114.
Classified Index, Pages 106 to 113.
Classified Opportunities, Pages 76, 77 and 78.

BALTIMORE, AUGUST 31, 1911

B. t. u. THE MEASURE OF HEAT

The term British thermal unit (abbreviated B. t. u.), often confronts the user of coal. As a yard stick is a measure of length, a B. t. u. is a measure of heat. The total amount of heat contained in a pound of fuel, all of which is liberated by complete combustion, is expressed in B. t. u.'s. A single heat unit is the amount of heat required to raise the temperature of one pound of water one degree Fahrenheit at atmospheric temperature. Heat units make steam and steam makes power. Below are tabulated, from some of the highest scientific authorities, the heat values of the commoner combustibles contained in coal:

SUBSTANCE	B. t. u. Per Lb.	
Acetylene Gas	21,465	Included in the "Volatile Matter" of proximate analysis.
Marsh Gas	23,515	
Olefiant Gas	21,345	
Hydrogen Gas	62,035	
Carbon	14,450	"Fixed Carbon" of proximate analysis.

CLINCHFIELD COAL IS HIGH IN HEAT VALUE

Clinchfield coal is rich in Hydrogen and the Hydro-Carbon gases shown above. These "VOLATILE" gases burn above the fuel bed with rapidity and great intensity in close proximity to the boiler surfaces. Quick liberation of heat units means quick generation of steam; hence the economy in using Clinchfield coal which maintains boilers at high capacity easily and continuously, thus delivering more than the rated horsepower. Clinchfield coal ranges from 14,000 to 14,700 heat units per pound, because it contains small percentages of oxygen, moisture and ash, which are valueless, and large percentages of the combustibles highest in heat value.

OUTPUT OF MINES OF

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2,000,000 Tons Per Annum, and Growing

CLINCHFIELD FUEL COMPANY

Selling Agent

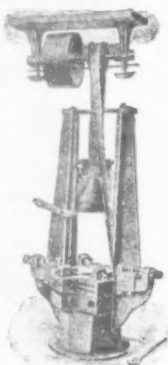
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Southern Terminal C., C. & O. Ry.

PERFORATED METALS FOR ALL USES

You will find our prices and goods "RIGHT"
Send complete specifications.
Send for Metal sample plate. **Erdle Perforating Co., Rochester, N. Y.**

Bliss Drop Presses



Are built in a large number of sizes and extensively used in the manufacture of sheet-metal goods, hardware, cutlery, silverware, etc. They are proportioned with a view to the greatest strength and accuracy. The poppets are wrought-iron forgings, held in place by keys which may be easily removed. The guides are provided with adjusting screws to compensate for wear. The weight of the hammer, length of guides, and height of bed can be considerably modified to suit special requirements. Send for full details.

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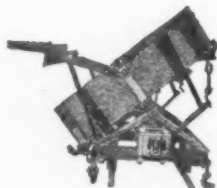
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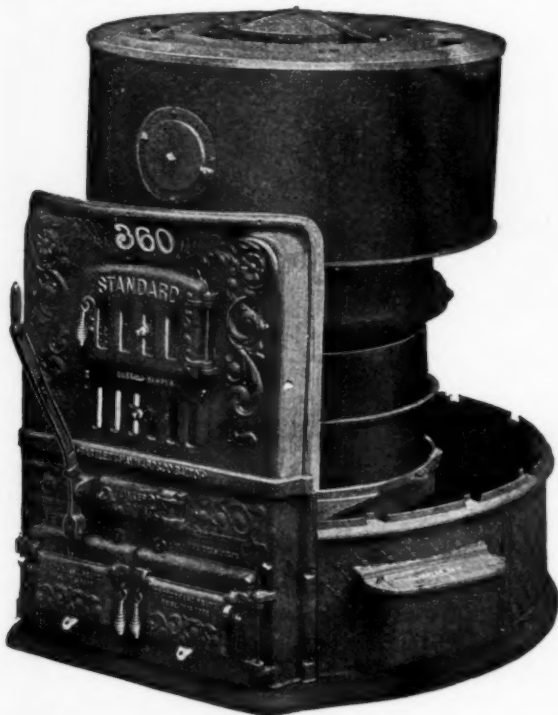
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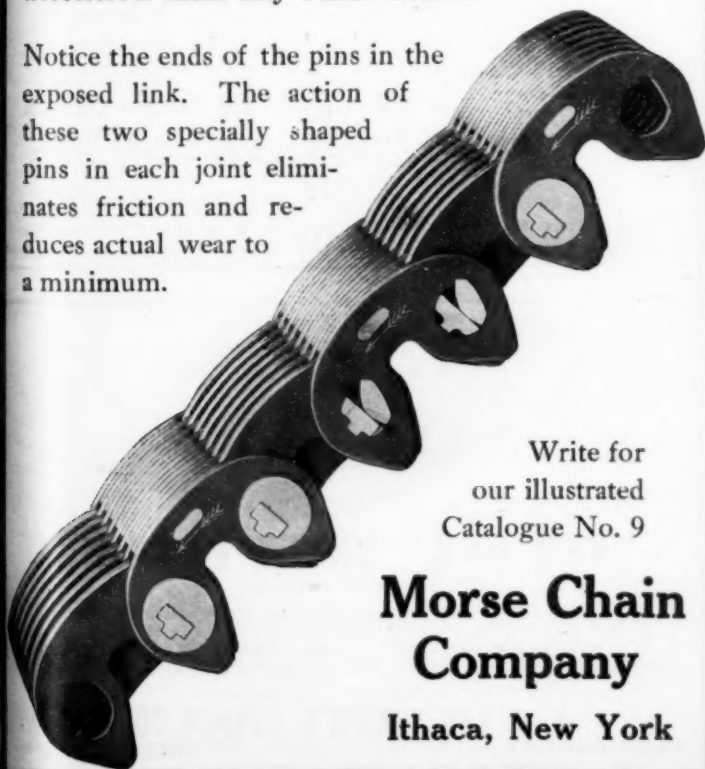
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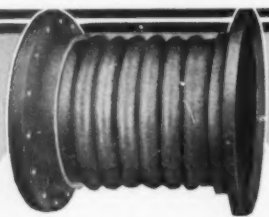
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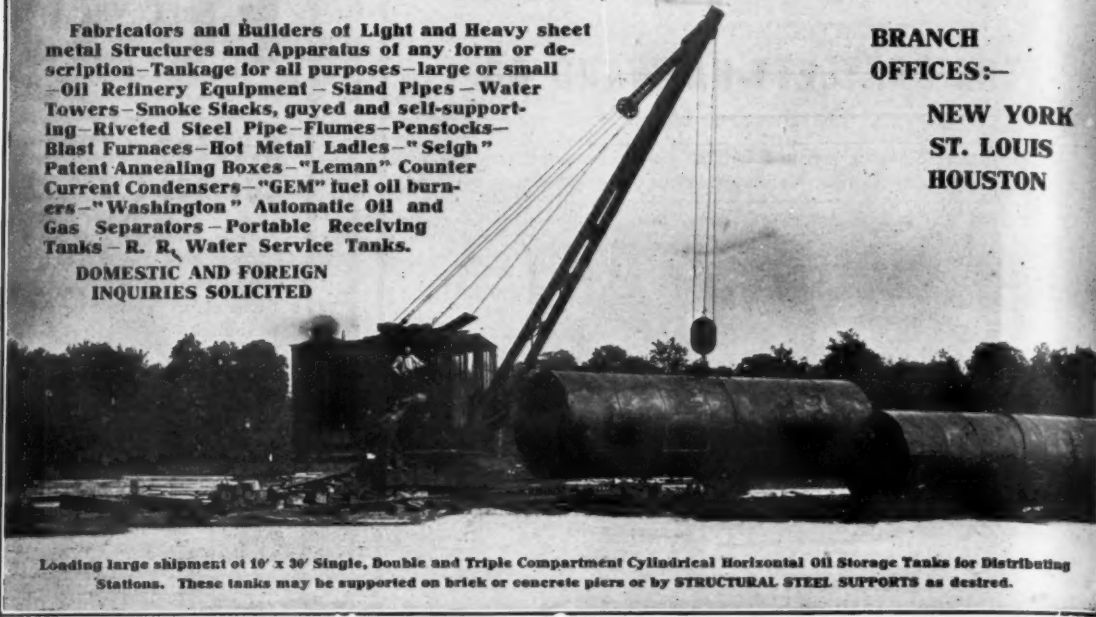
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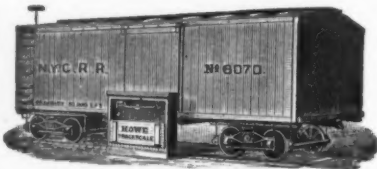
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OF ALL KINDS.



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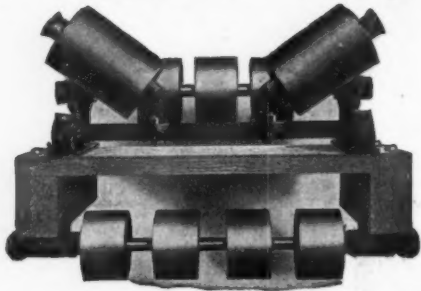
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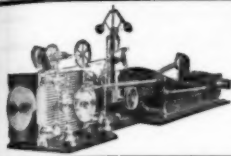
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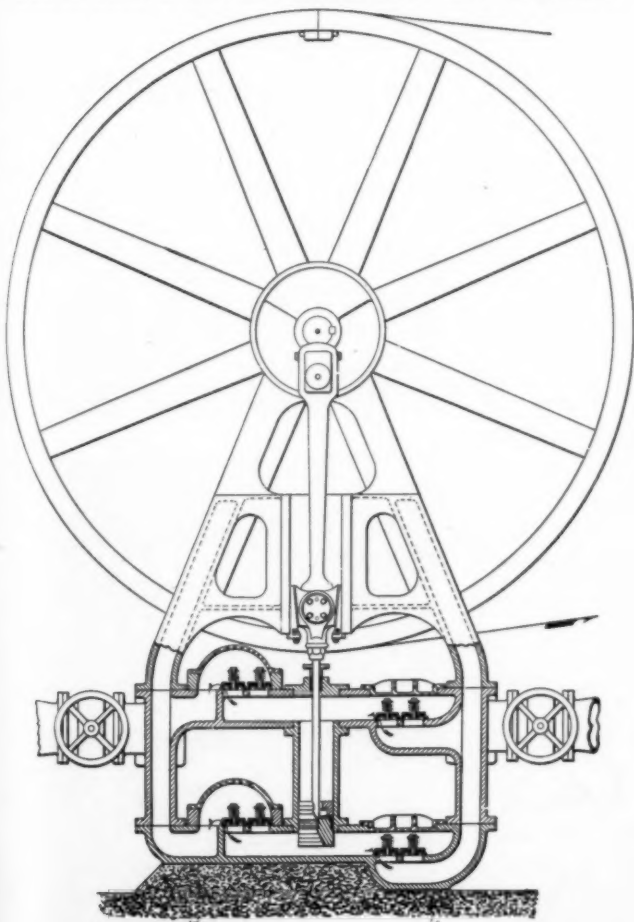
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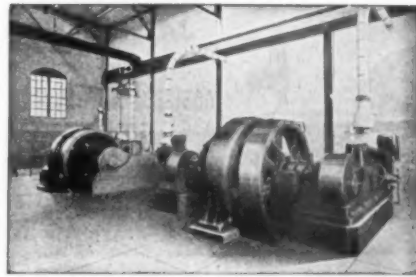


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Hamilton Power Pumps. Send for Bulletin "G"

The Hooven, Owens, Rentschler Co., Hamilton, Ohio



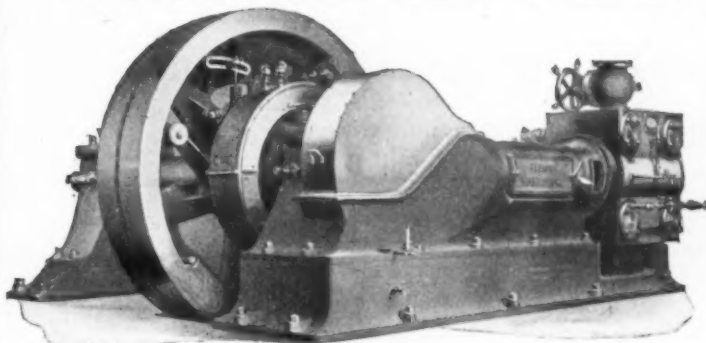
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For Electric Service

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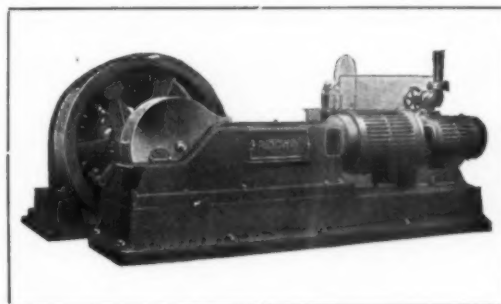


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The balanced valve shows less wear, makes possible a higher engine efficiency and responds more quickly to the action of the governor than does an unbalanced valve.

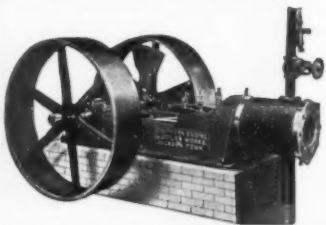
The governor is both simple and sensitive, is easily adjusted, and, on account of the slight friction of the valves and valve gear, seldom requires attention and repairs.

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for direct connected gas blowers has been placed
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Twenty-one 225 H. P.

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What makes it more remarkable is the fact that
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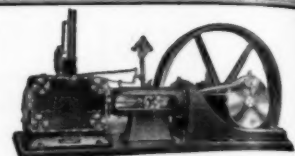
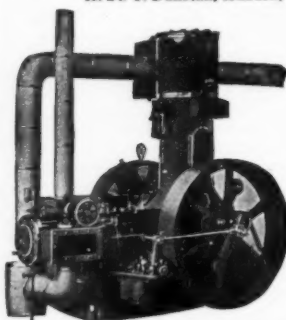
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BOUND BROOK, N. J.
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Boilers of all Styles and Sizes
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INCORPORATED FEB. 1, 1870
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SIMPLICITY—the most
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Turbine—the Westinghouse
Steam Turbine—the turbine
of yesterday, today and to-
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Write nearest office for particulars.

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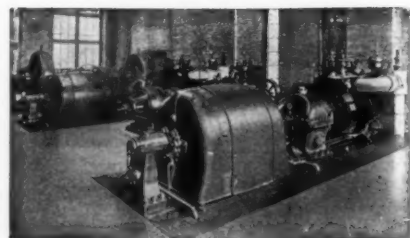
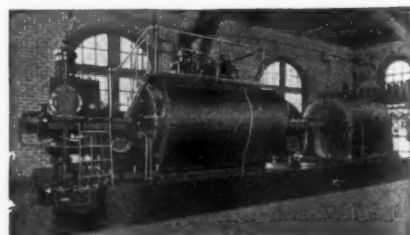
Steam Turbines, Steam Engines, Gas Engines, Gas Producers, Mechanical Stokers and Condensers

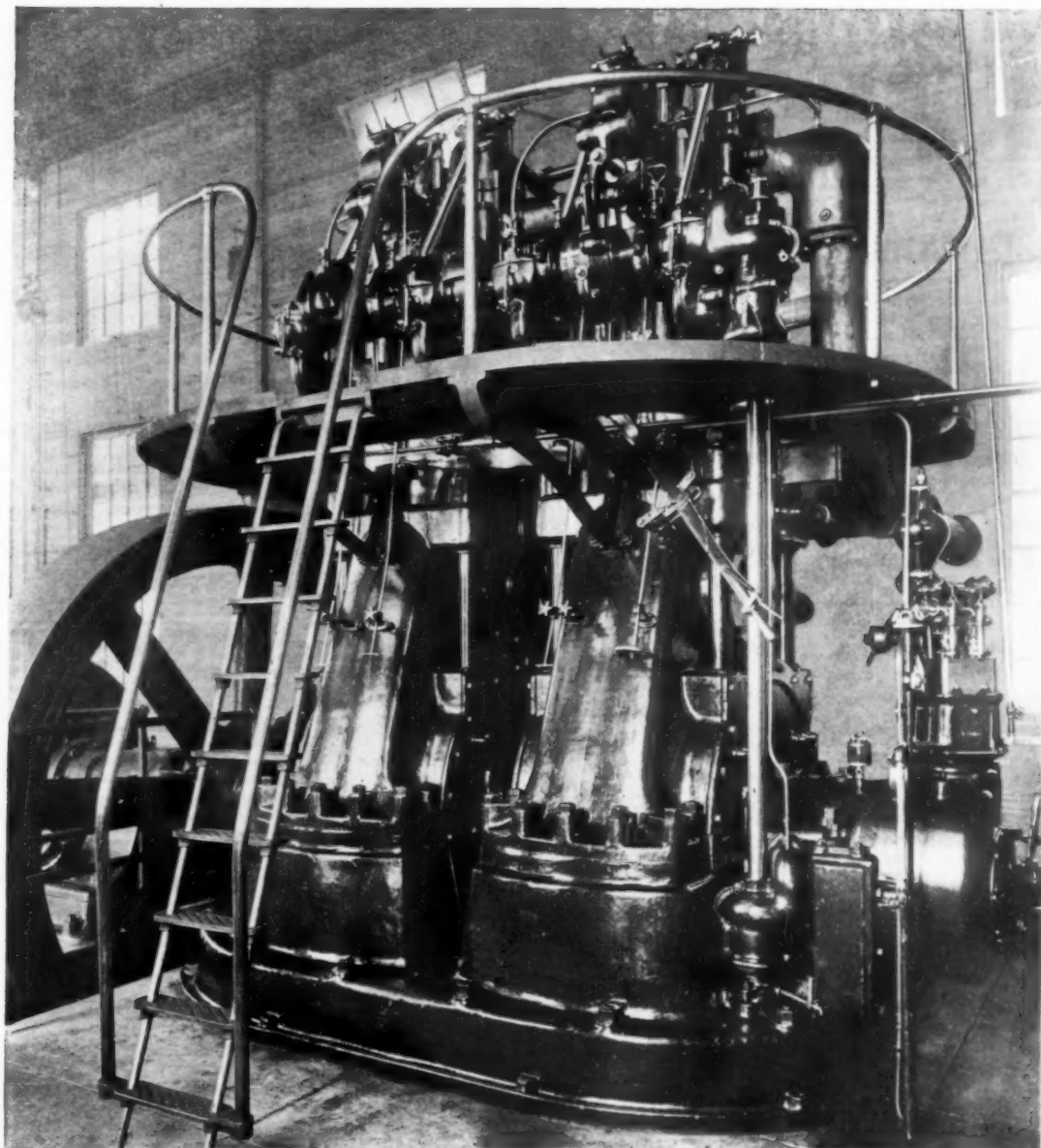
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Cleveland, New England Building
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Cincinnati, 1103 Traction Building

Philadelphia, North American Building
Denver, 1062 Gas & Electric Bldg.
San Francisco, Hunt, Mirk & Co.

Mexico: Compania Ingeniera, Importadora y Contratista, S. A. (Successors to G. & O. Braniff & Company),
City of Mexico.





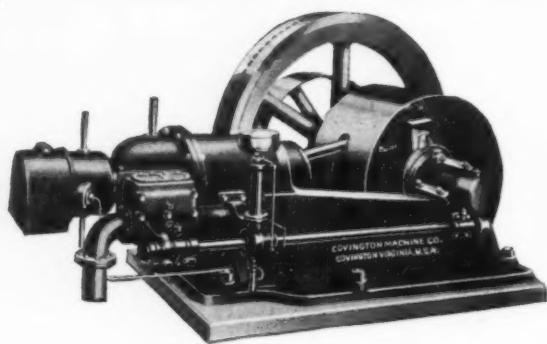
The Atlas Engine Works of Indianapolis is prepared to build for 1911-12 delivery a limited number of

Atlas Crude-Oil Engines (Diesel Type)

of its own improved design, in the following sizes: 2, 3 and 4 Vertical Cylinders (300, 450 and 600 HP.) and multiples thereof. They will be sold under definite guarantee of fuel consumption.

A complete report of a test of one of these engines made by a disinterested, recognized authority on gas engines, will be mailed upon request.

Atlas Engine Works
Indianapolis



A Noted American Says:

*"If you would dine well, buy Stocks;
if you would sleep well, buy Bonds."*

YOU will enjoy the liberal returns of exceptional Stocks and the security of good Bonds when you install
COVINGTON OIL ENGINES

These Engines produce much power from small quantities of cheap fuel oil. Steam plants produce little power from large quantities of expensive coal. Most coal energy goes up the chimney.

Handling coal and keeping the boiler plant tight are big items. Central-Station power rates cover the costs of steam plant operation and up-keep, as well as the coal-energy losses that go up in smoke.

The Oil Engine furnishes one-hundred-horsepower for one hour on 13½ gallons of fuel oil. With oil at 3c per gallon, the fuel cost for 100-h.p. is 40c per hour, \$4.00 per day of ten hours.

Oil Engine fuel consumption drops with the load and ceases when the Engine is shut down.

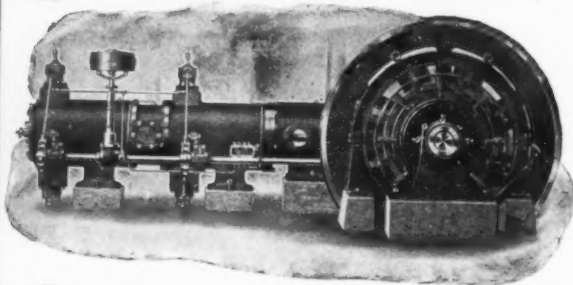
We have talked about the "Stocks," let us write you about the "Bonds"—reliability.

Covington Machine Company. : : Works: Covington, Virginia.

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DELIVER ELECTRICITY AT
Your Switchboard at a Great
Saving Over Central Station Prices



Either AC or DC Current at one cent per K. W. hour. Is this interesting? Write for details and get a bulletin of
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COMPLETE GAS POWER PLANTS
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Brass, Copper, Steel, Silver, Oxidized Iron, Etc.

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Incandescent Lamps

Unexcelled for Life, Brilliancy or
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Motors and Dynamos

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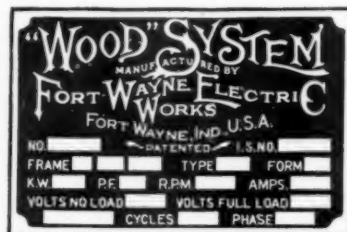
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A guarantee protects you for a short time only, but our name on a machine is assurance of its continuous satisfaction.

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They continue year after year to give satisfaction because we have never slighted the material or workmanship.

Some manufacturers as soon as they get a suitable designed machine try to see how much they can cheapen its construction without effecting its performance "very much."

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There's one sure way to get the quality you hope to get in the generator you buy--look for our nameplate on it.

We have several Bulletins giving details of our various types and sizes, that we will be glad to send you.

FORT WAYNE ELECTRIC WORKS

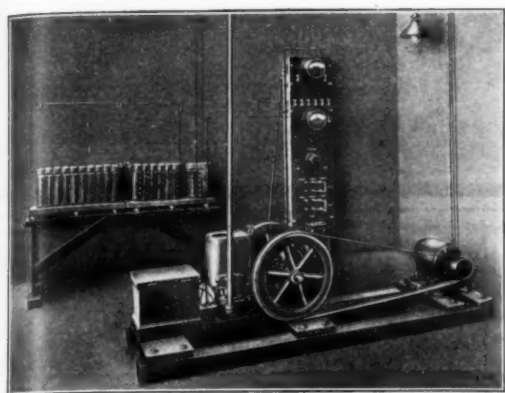
of General Electric Company
"Wood System"

1617 Broadway, Fort Wayne, Ind.

Branch Offices Most Large Cities.

G4

EVERYONE SHOULD USE ELECTRICITY FOR LIGHT



A complete electric lighting plant suitable for from
15 to 20 lights

and nearly all of the large cities, as well as by the Bell Telephone Companies and the Western Union and Postal Telegraph Companies, etc., etc.

These plants can be installed with very little trouble, can be operated by nearly any one and require very little space. Prices for complete plants range from \$400 and up, and cost for lighting is as low as 3c. per hour for 25 lamps. Hundreds of these plants are now in use all over the country.

Write the nearest Sales Office for a copy of the book "Small Electric Lights Plants", and learn how easily and cheaply you can have your own electric lighting plant.

THE ELECTRIC STORAGE BATTERY CO.

1888

PHILADELPHIA, PA.

1911

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It is now possible for every factory, home, country club, farm, etc., not situated near a public electric lighting station to have its own electric lighting plant, and to enjoy and profit by all the advantages of electricity. Plants can be purchased and installed at low cost and electric lighting can be furnished at very small expense.

These new low voltage electric lighting plants, using Tungsten lamps, consist of a small gas engine, dynamo, switchboard and storage battery.

An occasional running of the engine for a few hours stores the battery with electricity, so that electric lights are available any hour of the twenty-four—day or night.

Since the storage battery furnishes the bulk of the lighting it is the most important part of an electric lighting plant.

The "Chloride Accumulator"

used with the electric lighting plants furnished by this company is exactly the same type of battery as is used by the large electric lighting companies of New York, Chicago, Philadelphia,

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FOR ALL THINGS ELECTRICAL

At a Little Less Than You Pay Elsewhere Prompt Service

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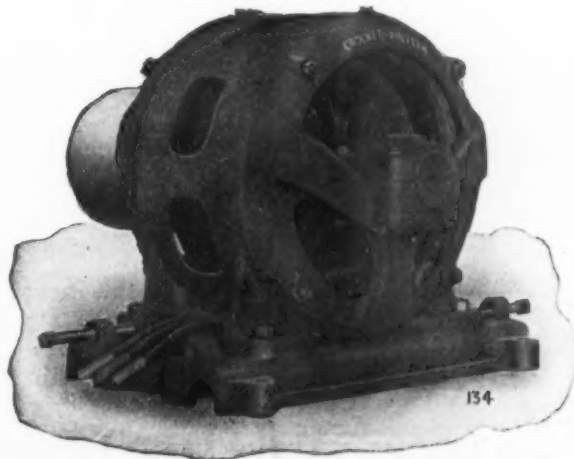
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All induction motors may be divided into two classes—those using the "open slot" construction and those built on the "closed slot" principle. The open slot construction has the advantage of mechanical convenience, while the closed slot construction has the advantage of electrical efficiency. When the slots are made open, it is much easier to replace damaged coils when for any reason repairs are necessary, but motors made on this principle usually have a lower power-factor and a lower efficiency. The Crocker-Wheeler Motors have a patented means of overcoming this defect, and by means of the magnetic slot bridge, they combine the advantages of both the open and closed slot construction without loss of any other desirable feature. We have a booklet which explains how this is accomplished and we will be glad to send you a copy on request.

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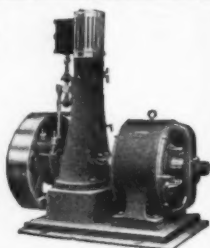
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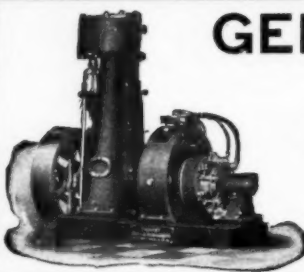
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Write for Bulletin 4743A.

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Condensation
automatically
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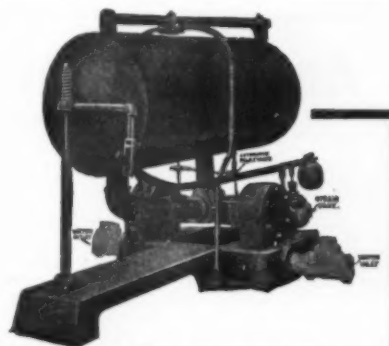
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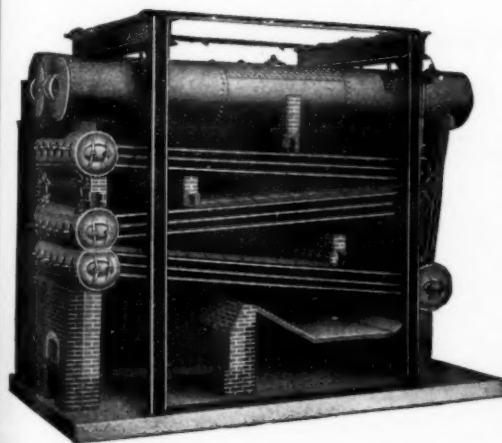
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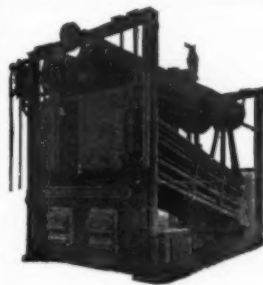


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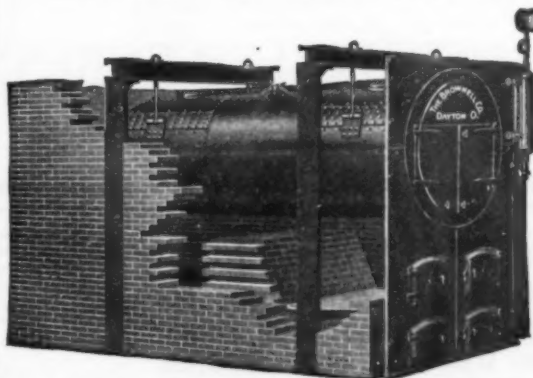
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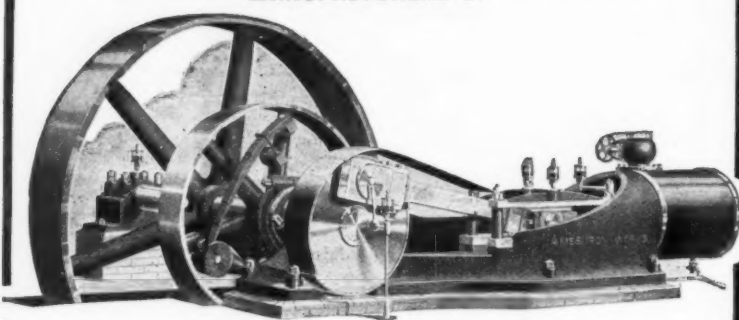
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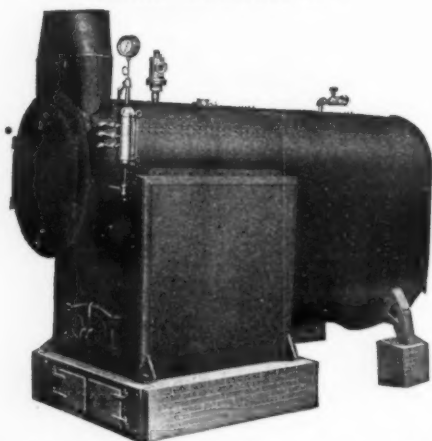
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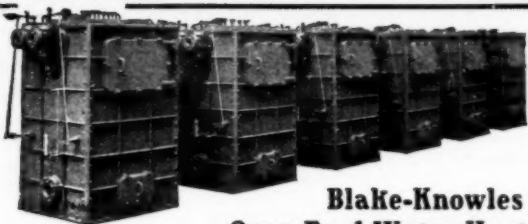
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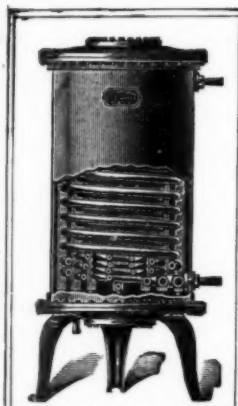
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Is guaranteed to deliver the water to the boiler at boiling temperature (210 to 212 degrees). It will also extract the oil from the exhaust, so that the steam after passing through the heater may be used for other heating purposes and the condensed water returned to the boiler without any additional elimination.

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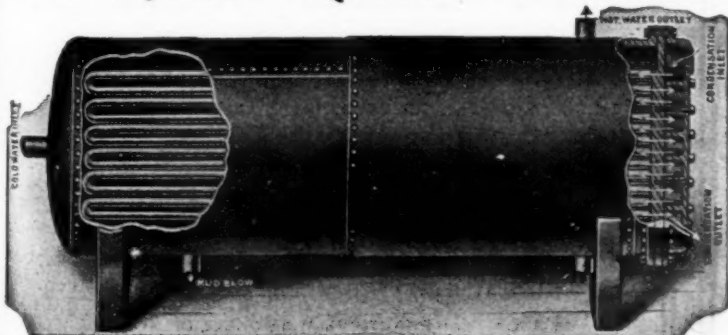
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It delivers water to the boiler at 200° to 212° Fahrenheit by utilizing your exhaust steam. Its value must be clear to everyone who uses or is acquainted with steam boilers. Let us send our catalogue.

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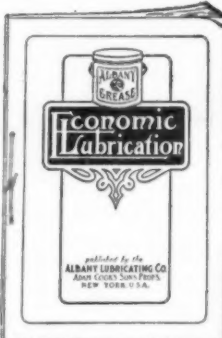
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Do you contemplate going into the ice or refrigerating business in any of its various forms?

Do you know that it is a recognized fact among competent and disinterested refrigerating engineers that neither the compression nor absorption system is superior to the other for all purposes and under all conditions, but that each possesses distinct and substantial advantages over the other for some purposes and under some conditions?

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In the first place, such a company should, from its varied and extensive experience, be fully competent to advise you.

In the second place, such a company has absolutely no interest in conflict with yours in giving advice.

Two cogent reasons, are they not?

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Start right; that is more than half the battle, communicate with

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Manufacturers of all sizes and types of both the Compression and Absorption Systems of Ice Making and Refrigeration.

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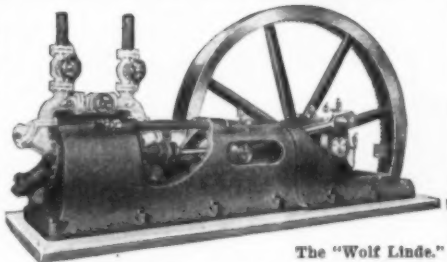
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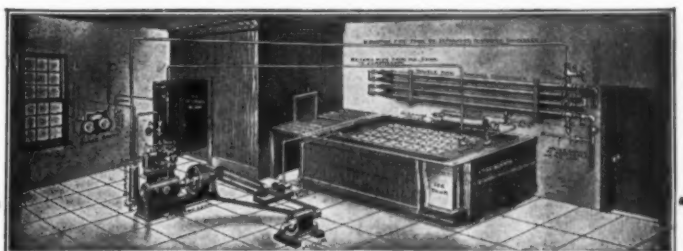
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This system can be easily and quickly installed when your plant is shut down for repairs.

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Investigate it!

Its operation is regular, simple and gives absolute control of the Ammonia System.

The Check Valve (the application of which is being patented) is the principal feature. It prevents backslashing and allows the ammonia to complete its work in the tank.

Cost is less than that of Dry Gas System, and better results are produced.

Ask for quotations and particulars.

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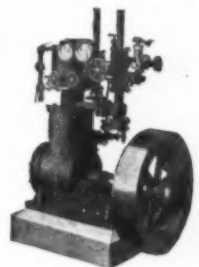
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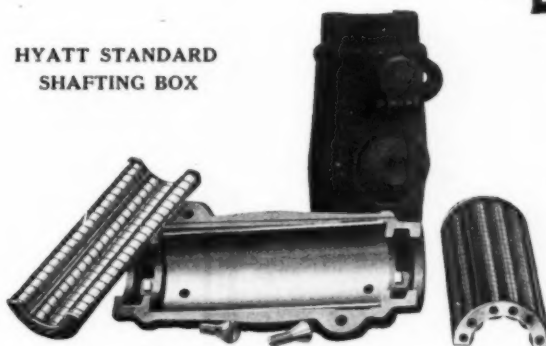
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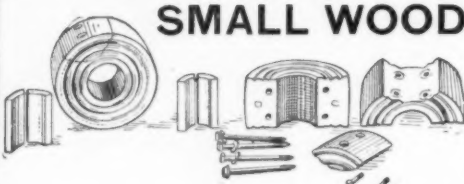
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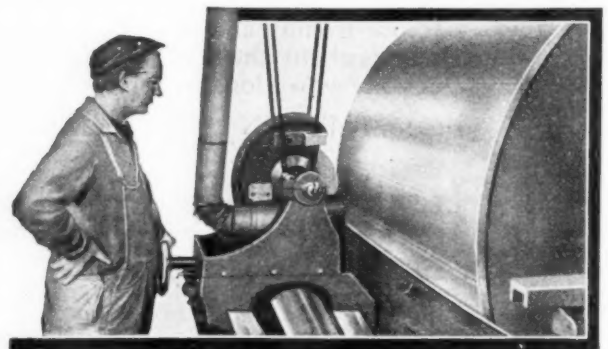
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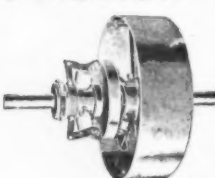
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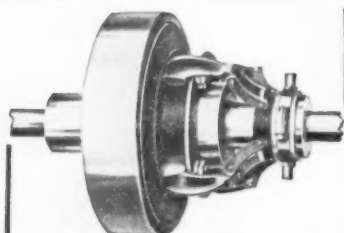
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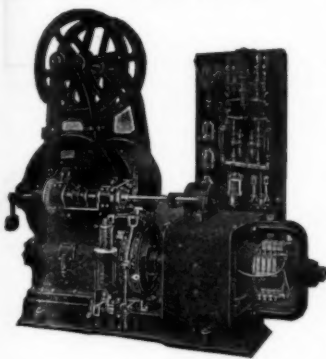
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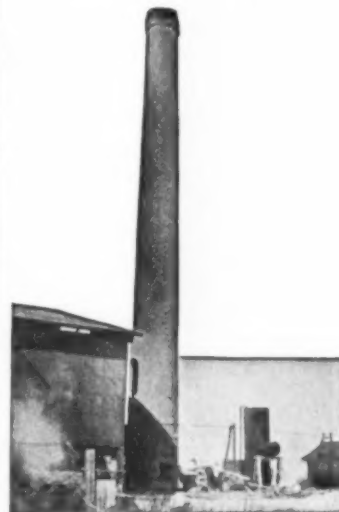
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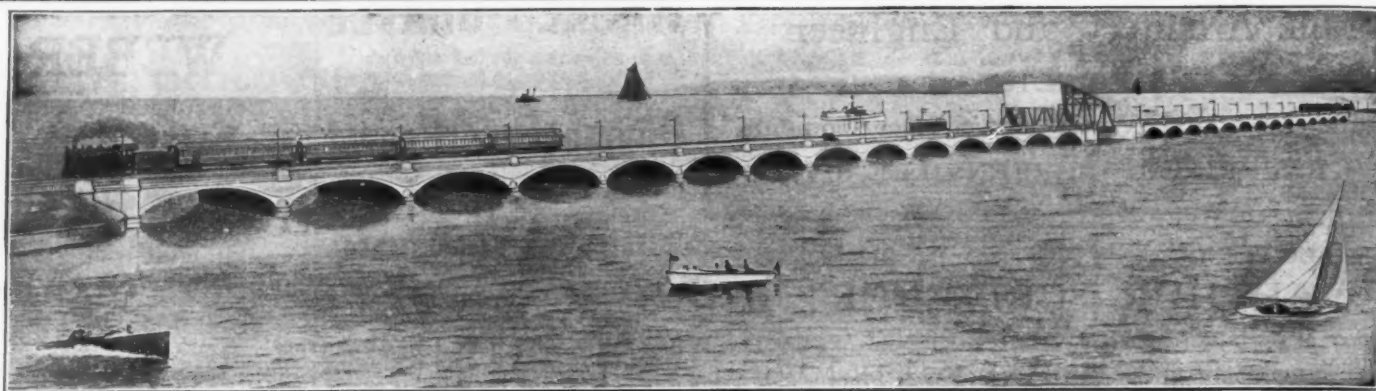
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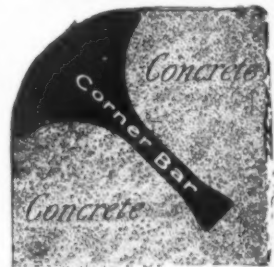
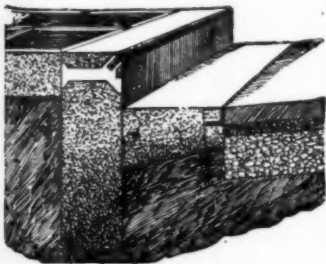
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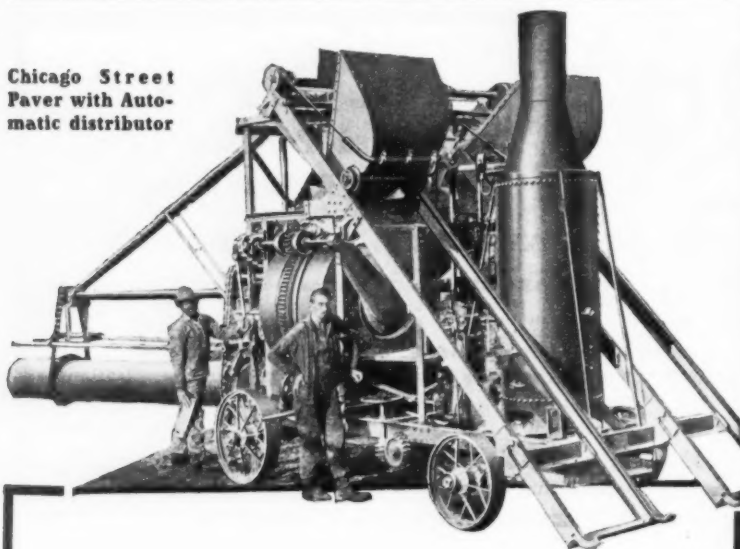
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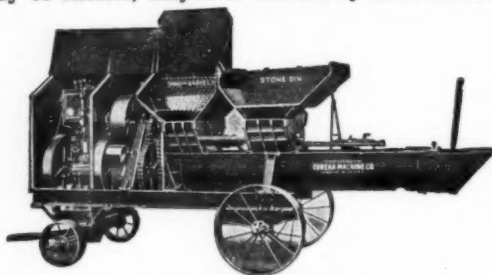
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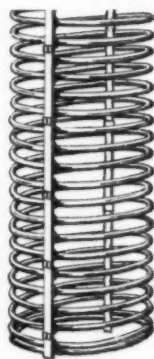
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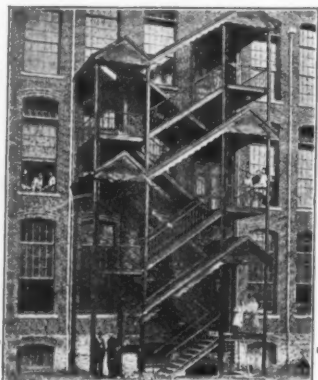
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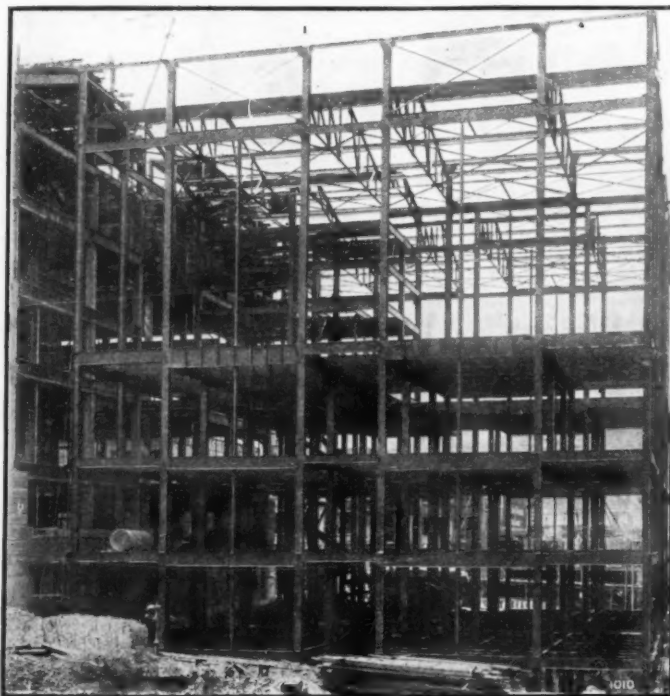
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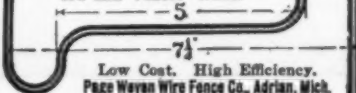
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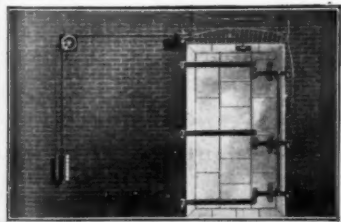
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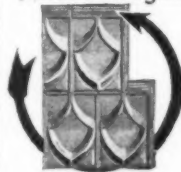
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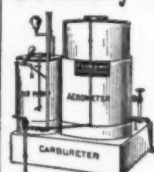
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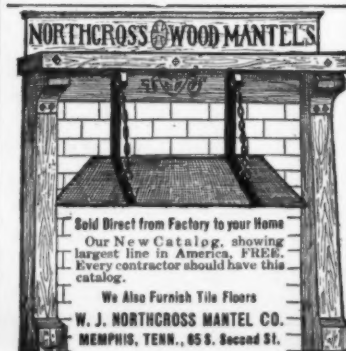
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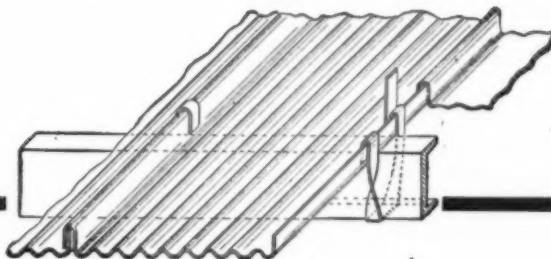
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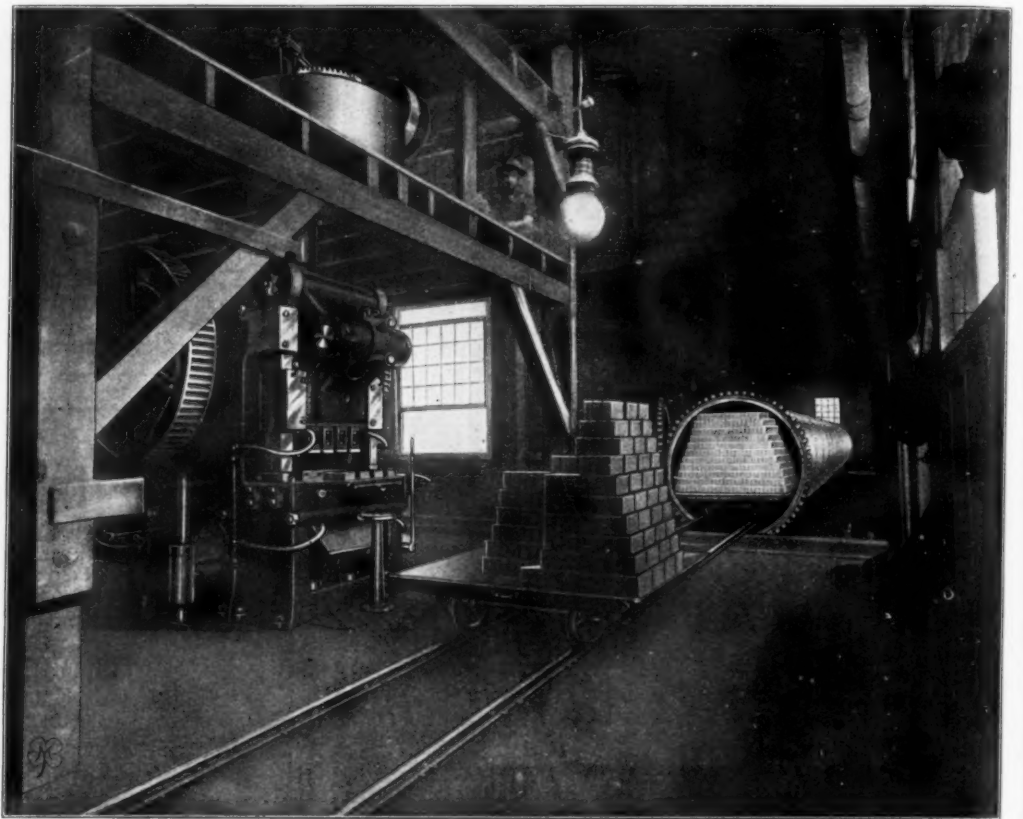
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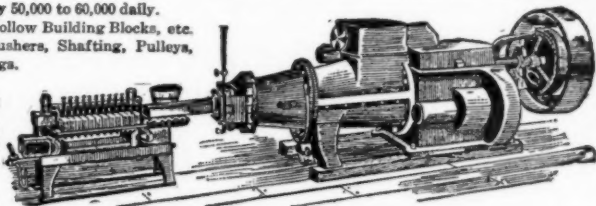
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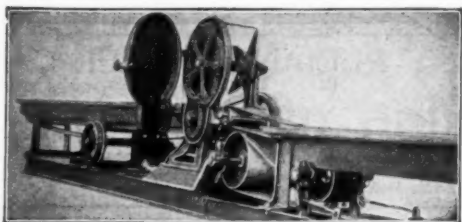
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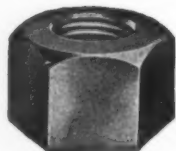
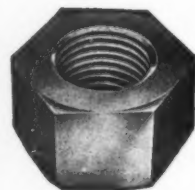
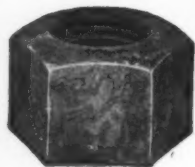
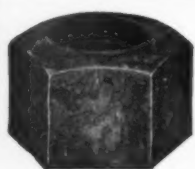
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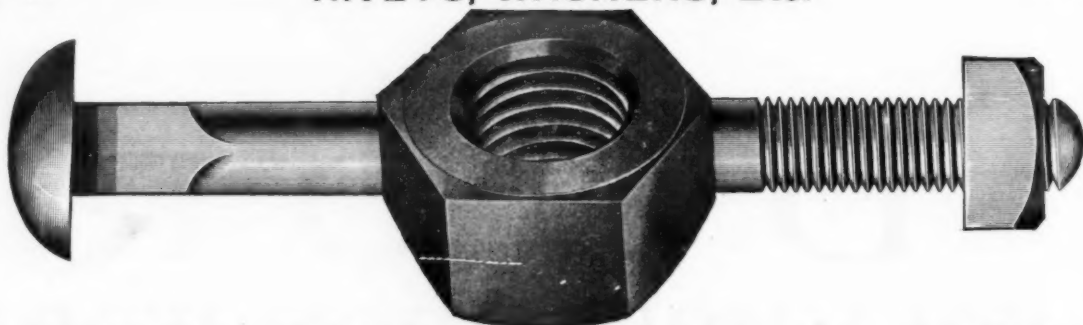
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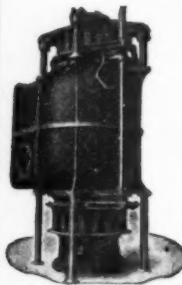
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MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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BALTIMORE, AUGUST 31, 1911

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BALTIMORE, AUGUST 31, 1911.

EVERYTHING TENDING SOUTH- WARD.

In the financial circles of New York and New England there is a growing sentiment that the South is to be the center of the greatest business and financial activity of the country. The leading bankers of the East, many of whom in former years were somewhat skeptical about the South as a field for investment, are now very free in admitting that this section is the most inviting field for investment. The change of sentiment is very pronounced. No one can mingle with the financial people of New York and Boston and other Eastern centers, as well as with those in the smaller cities of the Middle and New England States, without being greatly impressed with the unanimity of sentiment as to the great prosperity ahead of the South. In portions of the West this sentiment is equally as pronounced. The men who led in the great colonization enterprises of the West and the Pacific Coast are now finding in the South a field for activity which is claiming their attention as never before. Scarcely a day passes without a report of the sale of some big tract of land to Western people for colonization, or for reclamation, in order to prepare it for colonization work later on. No phase of Southern development in the last decade has been more striking than that which we now see in the purchase of large tracts of land in all portions of the South for settlement by Western people. It is one of the most interesting phases of American development. It means the utilization of millions of acres of land that have heretofore been

practically valueless and the bringing into the South of tens of thousands of the better class of farmers from other sections.

As the financial people of the East and the colonization men of the West are looking to the South as the coming center of operations, so the manufacturers and the contractors and the builders of the whole country are beginning to understand that this section is to offer the broadest field for activity in the country. Here great forces are concentrating for industrial upbuilding which will result in an enormous expansion of the manufacturing and mining and railroad interests of the South. Even now the sixteen Southern States covered by the MANUFACTURERS RECORD, as we stated last week, have invested in manufacturing \$200,000,000 more than the total capital invested in manufacturing in the United States in 1880. Notwithstanding this astonishing situation, it is everywhere recognized that the South's industrial development is really just beginning. The wise manufacturers and contractors who plan far ahead and look to future achievements rather than to immediate results are everywhere planting their agencies or their offices in the South, that they may get a foothold in this growing territory and share in its great prosperity as the years go on.

AMERICAN POTASH.

Interest in the question of having an assured supply of potash, accentuated by the recent dispute with German producers, seems likely to result in a comprehensive search for sources of the important mineral in this country. It will be recalled that nearly six years ago Edward Atkinson of Boston urged through the columns of the MANUFACTURERS RECORD that steps be taken to make the United States less dependent upon Germany for its supply of this vital and essential element in nearly all commercial fertilizers. He suggested that the many potash springs in the arid and semi-arid belt of country extending from the far North to the far South on the eastern side of the Rocky Mountains revealed the presence of potash somewhere beneath the surface, and he said that the man who could find, by boring, a potash mine corresponding to the great German deposits would add more to the resources of this country and to his own wealth than by the discovery of any more mines of gold or silver or copper or iron. The growth of public opinion on this point since then is indicated by an appropriation by Congress of \$20,000 for the current year to enable the United States Geological Survey to investigate the possible sources of potash salts in this country. The position of the Survey is that one of these sources is in association with saline deposits left by the drying up of large bodies of salty waters such as are known to have existed in many of the present desert areas of Southwest

Oregon, Nevada, Southwest California, Utah and elsewhere. It is thought that the red beds in Texas, Oklahoma, Kansas, Colorado, New Mexico and perhaps other States containing gypsum and salt might be explored profitably for potash salts. This is part of the work of the Survey in prosecuting searches for deposits of minerals—

which shall furnish the three necessary elements of plant food that are contained in "complete fertilizer," namely, phosphate rock, nitrate salts, and potash salts. The Survey has already discovered and surveyed enormous deposits of phosphate rock, and 2,398,590 acres of public land containing phosphate, withdrawn at the recommendation of the Geological Survey, are now waiting legislation by Congress to enable their development. In order, however, to insure an "all-American" fertilizer, regardless of importations from other countries, it remains to discover deposits of nitrate of soda and potash salts. As both of these minerals are readily soluble and are not to be found as "outcrops" like ordinary rocks, the mission of the Survey is not an easy one. Nevertheless, it is believed that the geologic conditions prevailing throughout a large portion of the arid West favored the accumulation, during earlier periods of the earth's history, of both of these salts, and that if these still exist in concentrated deposits it is only a question of search to discover them. Hardly anything could be suggested which would be of greater assistance to the American farmer than the discovery of commercial deposits of either of these necessary fertilizing minerals.

Charles N. Gould, State Geologist of Oklahoma, ever alert to advance the interests of his State, has been looking into this subject, and has, it is reported, obtained the services of an expert from the National Survey to follow closely developments in the search for potash in the western part of Oklahoma. Under the appropriation the Survey will establish a laboratory at Fallon, Nev., for the purpose of testing samples of salines from the Great Basin of the West. The results of this work will be awaited with interest. Should the saline deposits be found sufficiently rich in potash to have a commercial value, and should there be located large and important deposits, the apprehension that the country might some day be cut off from a supply of necessary plant food will be allayed.

TWO NEW STATES.

Entrance of Arizona and New Mexico into the Union, which now seems assured, will round out the last acquisition of territory by the United States made before the Civil War. The two new States are lusty and full of promise as contributors to the growth of the country. In the past ten years the population of both of them has grown at a greater rate than the population of the country as a whole. In 1890 the combined population of the two territories was only a few thousand greater than the population of the District of Columbia. Between 1900 and 1910, with the country's population increasing at the rate of 21 per cent., the population of Arizona increased from 122,931 to 204,354, or 65.2 per cent., and

that of New Mexico from 195,310 to 327,301, or 67.5 per cent.

The value of twelve leading crops increased between 1890 and 1910 from \$2,071,000 to \$5,302,000 in Arizona, and from \$2,456,000 to \$7,617,000 in New Mexico. Between 1900 and 1910 the improved area in farms in Arizona increased from 225,000 to 349,000 acres, or 57 per cent.; the value of farm lands from \$11,416,000 to \$42,116,000, or 269 per cent.; the value of farm buildings from \$2,267,000 to \$4,918,000, or 117 per cent., and the average value per acre of farm land from \$5.90 to \$33.91, or 475 per cent. Between 1900 and 1909 the capital invested in factories in the Territory increased from \$9,516,000 to \$32,875,000, or 245 per cent., and the value of factory products from \$20,439,000 to \$50,074,000, or 145 per cent.

The increase in the improved area of farms in New Mexico in the ten years was from 327,000 to 1,464,000 acres, or 348 per cent.; in the value of land from \$17,324,000 to \$38,496,000, or 469 per cent.; in the value of farm buildings from \$3,505,000 to \$12,934,000, or 263 per cent., and in the average value per acre of farm lands from \$3.38 to \$8.77, or 159 per cent. In the nine years factory capital increased from \$2,161,000 to \$7,396,000, or 242 per cent., and the value of factory products from \$4,061,000 to \$7,599,000, or 87 per cent.

Agriculture has been of comparatively small importance in the two Territories until recent years, when irrigation has given it an impetus, but its recent development, and also the growth of manufacturing, are guaranty of the future. Mining is of much consequence in both States. In Arizona in 1909 were produced 291,110,298 pounds of copper, valued at \$37,844,339; 127,071 ounces of gold, valued at \$2,626,800, and 2,523,000 ounces of silver, valued at \$1,312,300, besides lead, zinc and other mineral products, bringing the total for the year to \$43,155,406. New Mexico produced in the same year 2,891,128 tons of coal, valued at \$3,619,744, and 5,031,136 pounds of copper, valued at \$654,048, besides gold, lead, silver, zinc and other products. Coal production has hardly begun in Arizona in fields estimated to contain 60,000,000 tons, and in New Mexico, where the coal area embraces 18,235 square miles, hardly 50,000,000 of the 163,780,000,000 tons have been mined. So, too, cotton-growing possibilities of that region are just beginning to be developed. What irrigation will do there has already been fairly well demonstrated. The mineral resources are sufficient basis for a large manufacturing activity. The two new States are likely to give an excellent account of themselves.

THE FRIENDS OF THE COUNTRY.

Would you mind writing an editorial giving your ideas on "Who has been the best friend to the cotton manufacturers, the Senators and Congressmen who voted to have

the tariff reduced on cotton goods or President Taft in vetoing the bill?"

This question from a cotton manufacturer in an Eastern State may be answered in one word, Neither.

No tariff tinkering would have been possible had there been no special session of the Congress. In March last there was no reason of value to the country for calling together the newly-elected members of Congress; there was every reason for giving the country surcease from political turmoil for a few months at least. Responsibility for acts attempted or acts accomplished by the Congress rests upon the President who called the special session. He compelled the Congress to meet. The country would have been satisfied with a recess of Congress for a year or two until the country could have adjusted itself to the embarrassments created by the Congress that had just come to an end. The country knew as well as Mr. Taft, who is no tyro in politics, that a special session of Congress at this time could be of benefit to no one save politicians scrambling for positions for the Presidential campaign of 1912. The country, regarding as of secondary importance the fortunes of this politician or that, could appreciate better than Mr. Taft or any other politician that such scrambling could have only a detrimental effect upon the country. Knowledge of last March has been reinforced by the outcome of the message calling the special session. No accomplishment of that session justifies the call for it. No failure, through a veto, of any attempt of the Congress mitigates the fact that the attempt was made possible, especially in view of the conviction that the attempt was made in more than one instance in full knowledge that the veto would come. To credit the President for his veto of the cotton tariff when his message calling the special session of Congress made possible the passage of the cotton tariff bill is very much like crediting a man who deliberately leaves open a stable door for catching the horse that subsequently and consequently runs away from the stable, or like crediting a Congress which has hampered, by its use of the people's time and the people's money in preliminaries to a national political campaign, the material interests of the country, because it has wasted two hundred thousand dollars less than the usual Congress, or like crediting with acumen members of Congress from the South who, having contributed in their votes on the cotton tariff to the artificial movement to depress the price of cotton to the cotton-growers, support the artificial device of a call to cotton-growers to hold their cotton for a certain price.

It is unfortunate that the salaries of politicians in office are paid regardless of the distress that their acts may bring upon the great mass of the 92,000,000 inhabitants of the country, the employes in manufacturing industry, the farmers of all kinds, the workers in the mines and the forests, the millions of wage-earners in transportation and commerce and trade, to say nothing of the capital in brains and money needed for the healthy growth of the country in the employment of the wage-earners.

Presently, however, these millions will have their wits sharpened to the point of recognizing their real friends. When that day dawns, the Congress of the United States and the Executive will have to be concerned with the

legitimate affairs of the country, and will not spend their time beginning one political campaign or ending another at the expense of the country.

THE WORLD IRON, STEEL AND COAL OUTPUT.

The world's production of iron ore for 1909, the last year for which the figures are available, as presented in the annual report of the American Iron and Steel Association, shows a total of 132,876,000 tons, of which 51,294,271 tons, or 38.60 per cent., was mined in the United States. Next on the list came Germany and Luxemburg with 25,504,464 tons, or 19.19 per cent. of the total. The countries producing over 1,000,000 tons in that year were as follows:

Countries.	Tons.
United States.....	51,294,271
Germany and Luxemburg.....	25,504,464
France.....	11,889,990
Austria (including Bosnia and Herzegovina).....	2,616,346
Hungary.....	1,965,482
Russia.....	5,129,867
Sweden.....	3,886,060
Spain.....	9,384,634
Great Britain (including bog ore).....	14,982,655

Cuba is credited with 968,858 tons as the amount shipped from that country for the year, while Newfoundland is credited with the shipment of 991,115 tons. Greece produced 530,536 tons, and Algeria 890,776 tons. The production of pig iron in tons of 2240 pounds for the same year was as follows:

Countries.	Pig-Iron Production. Tons.	Per-centage.
United States.....	25,795,471	42.77
Great Britain.....	9,531,987	15.80
Germany and Luxemburg.....	12,644,946	20.96
France.....	3,573,848	5.93
Belgium.....	1,616,370	2.68
*Austria.....	1,514,113	2.51
Hungary.....	530,460	0.88
Russia.....	2,874,822	4.77
Sweden.....	444,764	0.74
Spain.....	403,554	0.67
Italy.....	207,800	0.34
Canada.....	677,090	1.12
Other countries.....	498,775	0.82

Total..... 60,314,000 100.00
*Includes Bosnia and Herzegovina.
†1908.

This shows that in that year over 42 per cent. of the total pig-iron production of the world was credited to the United States, being a little more than twice as much as the production of Germany and Luxemburg.

The production of steel for the same year was as follows:

Countries.	Steel Production. Tons.	Per-centage.
United States.....	23,955,021	44.26
Great Britain.....	6,070,000	11.22
Germany and Luxemburg.....	12,049,834	22.26
France.....	3,103,568	5.73
Belgium.....	1,632,390	3.02
*Austria.....	1,361,063	2.52
Hungary.....	608,475	1.12
Russia.....	3,098,940	5.56
Sweden.....	315,426	0.58
Spain.....	251,560	0.46
Italy.....	661,569	1.22
Canada.....	678,751	1.25
Other countries.....	432,693	0.80

Total..... 54,127,000 100.00
*Includes Bosnia and Herzegovina.
†1908.

In the case of steel the United States produced a slightly larger percentage than it did of pig iron, or 44.26 per cent., while Germany also had a larger percentage of steel, and Great Britain a considerably lower percentage than of pig iron.

Commenting on these figures, Mr. Swank in his annual reports calls attention to the fact that as late as 1850 the world's production of iron was 4,750,000 tons, and in 1870 11,900,000 tons, which was less than one-fifth of the production for 1909. The rapidity of development since 1880 is shown by the fact that the production of that year of 17,950,000 tons increased in 1890 to 27,157,000 tons, in 1900 to 40,400,000 tons and in 1909 to 60,314,000 tons. The increase between 1900 and 1909 exceeded by nearly 3,000,000 tons the total output of the world in 1880.

Closely connected with the iron and steel trade is the coal industry. It has been said that the consumption of coal is the measure of a nation's civilization. It is at least the measure of its material advancement. The output for 1909 was as follows:

Countries.	Coal and Lignite Production. Tons.	Per-centage.
United States.....	411,431,621	37.30
Great Britain.....	263,774,312	23.91
Germany and Luxemburg.....	217,445,656	19.71
France.....	37,840,086	3.43
Algeria.....	23,517,550	2.15
*Austria.....	40,452,872	3.67
Hungary.....	9,056,144	0.82
Russia.....	24,086,645	2.18
Sweden.....	246,808	0.02
Spain.....	4,124,751	0.37
Italy.....	555,073	0.05
Canada.....	9,376,317	0.85
Newfoundland.....
Cuba.....
Transvaal.....	3,235,497	0.33
Natal.....	1,786,583	0.16
India.....	11,870,114	1.08
Greece.....	3,873	0.00
New South Wales.....	7,019,879	0.64
New Zealand.....	1,911,247	0.17
Other Australasia.....	1,183,242	0.10
Japan.....	14,973,617	1.36
Other countries.....	18,974,203	1.72
Total.....	1,102,860,000	100.00

*Includes Bosnia and Herzegovina.

PACKAGE-CAR SERVICE UP TO DATE.

The Receivers and Shippers' Association of Cincinnati has issued a package-car guide for the use of merchants and their customers, thereby setting an example which could be imitated with advantage in other cities. Package-car service on fast freight trains has now been given for some years by the leading railroads, and the benefits thereof have been enjoyed and greatly appreciated. This service consists of loading in one or more cars, according to the volume of freight daily, all packages for the same destination and forwarding them on fast freight trains, instead of loading them in different cars on slow or way freight trains. Wherever it is possible to make up daily a carload of packages from different shippers to a given point the railroads put on a car for that place, so that it is merely cut off the train there and sidetracked without delaying the entire train to unload packages from different cars, as would be the case on a local or way freight train. There are about 600 package cars daily out of Cincinnati.

The guide which has been published gives a list of several hundred points to which package cars are sent daily from that city and their time of arrival at their respective destinations. Thus delivery of package-car freight is made at Louisville the next morning, at St. Louis on the second morning and at Kansas City on the third morning after shipment. Southward, freight for Lexington, Ky., is delivered the next morning, to Nashville, Tenn., the second morning and to New Orleans the third morning. The number of points at which freight is delivered the next morning after shipment greatly exceeds the number of other points to which longer time is taken. All this information is of value to both those who buy and those who sell goods, as it enables one to say when goods will be received and the other when they may be expected for delivery to retail trade. Some of the other information relates to the proper depot to send goods for different points, all of it being prepared with the object of securing expedition to shipments.

The Receivers and Shippers' Association is preparing a book which will contain full detailed information about the Cincinnati package-car service. It is announced that the volume will name practically every railroad station in a number of the States and

how and where freight should be loaded to reach each place, besides points of transfer and the time in transit. That the service is extensive is shown by the schedules of daily cars to points as far west as San Francisco, south to Jacksonville, east to Boston and north to St. Paul, including points intervening. The work of the association appears to consist of doing everything possible to maintain and improve the efficiency of the package-car service, as well as to furnish its members with any information in relation to it. The data presented is official, having been obtained directly from the railroad companies and verified by their officers.

What is being done for Cincinnati by this association might be done for others places by similar organizations. Cities which are large distributing points would reap advantage from the collection and dissemination of such information as is presented in the Cincinnati Official Package-car Guide No. 1.

FOREIGN IMMIGRANTS AND THE SOUTH.

In a letter to the Chamber of Commerce of Savannah, Ga., calling attention "to the fact that the South is not getting its share of the tremendous immigration into this country yearly," George F. Hesselmeier of Kennesaw, Ga., recalls that fifty or a hundred years ago sailing ships from Europe invariably made calls at the South Atlantic and Gulf ports, and consequently many immigrants were landed in the South and were effective in its development. As long as foreign immigration contains, as at present, the elements in predominating numbers that can never be assimilated in America's population to the benefit of the country, as long as well-organized and heavily-financed efforts in this country and abroad are maintained to use the South as a field for massing great hordes of undesirable aliens in colonization schemes having the good of this country as of secondary importance, if of any importance; as long as the desire for greater population in the South is made the cover for operations directed from New York to reduce, under the guise of philanthropy, the slum population of that or other cities, so long may the South be safe in viewing philosophically, as far as it is concerned, but with regret for the rest of the country, the spectacle of the rest of the country's receiving the bulk of present-day immigration to this country. That immigration, if not checked, is bound to make desirable elements in other parts of the country anxious to change their location. Recent movements toward Canada may, indeed, be partly accounted for by that anxiety. But the South, while welcoming with discrimination foreigners of any race or clime equipped to be of value instead of being detrimental to the country, should devote its great efforts in immigration to the attraction from other parts of the country of the thousands of active, ambitious and productive men, whether alien or native, who have the qualities that go to make up the progressive composite American of the future.

EMPHASIZING WEST VIRGINIA RESOURCES.

The seventh annual convention of the West Virginia State Board of Trade, which will be held at Moorefield, W. Va., September 12-13, promises

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to be one of the most interesting gatherings since that body's organization. Heretofore the industrial and commercial centers of the State were selected for the meetings, but Moorefield was chosen this year because of its location in the center of one of the State's richest horticultural and agricultural sections. In deciding upon Moorefield it was felt that the members of the association which represent the most active forces in all lines of endeavor throughout the State would have an opportunity to see at first hand and become impressed with the great value and extent of West Virginia's farm and fruit-growing lands.

Few people, even including many of its own population, fully realize that West Virginia possesses lands that are exceptionally well suited for the growth of fruit and farm products. They have been accustomed only to think of its wonderful coal, timber and mineral resources, but in many parts of West Virginia there are along its valleys and table lands and on its mountain tops soil and climatic conditions that are ideally adapted for the raising of grains, grasses and truck and the growth of peaches and apples. The valleys along the south branch of the Potomac River, of which Moorefield is the center, since prior to the Revolutionary War, have been devoted to agriculture. A few years ago some of the enterprising farmers, believing that the mountain tops and sides of this section possessed exactly the requirements necessary for successful growing of fruit, planted several orchards there. Their efforts succeeded beyond their fondest hopes. The soil, mountain air and climate proved to be ideally proportioned for producing peaches that have since become famous for their high quality and lusciousness. The success of the pioneers in this industry acted as a stimulus to others, and today can be found in Hardy county about 3,000,000 peach trees and 500,000 apple trees, and in Hampshire county 1,500,000 trees. The fruit from this section is bringing top prices in the leading markets of the country, with the result that this has proven a very profitable industry, some idea of which may be had from the fact that one of the older companies on a capital stock of \$100,000 has never paid less than 40 per cent. dividends annually.

But this south-branch country is not dependent alone upon its farm and fruit-growing lands. It has stored away in its hills millions of tons of iron ore and limestone that will some day make this section an important iron and steel-producing one. Ever since the pioneer days, for generation after generation, the people of this section have been content with the tilling of their farm lands, but the present generation, in full knowledge of the possibilities of this section, and with an indomitable determination to bring about a fuller development of its resources, have banded together in an organization known as the South Branch Board of Trade, which has become an active force in awakening its people to a full realization of the scope and value of the resources in this country, which has been aptly termed the "Land Overlooked."

What has been accomplished in this valley was entirely through the initiative of its own people, and having determined the results possible from the development of its lands, and realizing that they have more than they can develop, cultivate or care for themselves,

they are anxious to call attention of others to the opportunities available.

The West Virginia Board of Trade, therefore, in meeting at Moorefield, W. Va., cannot help being impressed not only with the important relation of this section to the State's general development, but also with the spirit of progressiveness dominating its people.

ELECTRICITY AND MOTORS IN FARM DEVELOPMENTS.

Two very interesting phases of development of town building and small-farm enterprises as an outcome of large landed operations are found in facts published in the MANUFACTURERS RECORD regarding the proposed farm-town scheme to be established by the Kent-Jordan Company of Greensboro, N. C., and the Baldwin Lumber Co. of Baldwin, La. The former company recently purchased about 36,000 acres of land in Carolina for colonization, one of the members of the company being Hon. William Kent, a member of Congress from California and reputed to be a very wealthy man. This company, as announced in the MANUFACTURERS RECORD of this week, will lay out a 200-acre tract into small farms, really into a farm-town plan, where every house will be provided with water, electric lights, sewerage system, etc.

This scheme of giving to small farmers the facilities of modern cities in the way of water, electricity and sewerage system is to be carried out on a somewhat broader scale, it seems, by the Baldwin Lumber Co. of Louisiana. That company, in giving some details regarding its proposed utilization of a 9000-acre tract of land, writes the MANUFACTURERS RECORD:

"As the land is cleared we will open up small farms of from 100 to 200 arpents, and upon each of these farms we will build modern homes. We expect to light these homes by electricity, which will be furnished from our power plant by wires following our railroad. We will, in due time, install a motor line for our patrons, and the electricity will enable the farmers to pump water and light their homes and barns, and have every other convenience around the home."

When the farmers of the South are provided with facilities of this kind, agriculture in this section will become one of the most inviting pursuits in the world. The North Carolina enterprise seems to look to starting a small farm-town site, with each home having a limited area of land for cultivation, but each home being supplied with water, electricity and a sewerage system, while the Louisiana undertaking is for the establishment of farms of ample size, provided with electricity for power and light purposes, and with a motor line for the use of the buyers of these farms.

These enterprises are but suggestive of many things that are being worked out throughout the South for the benefit of the agricultural interests of this section, making certain that Southern farmers will in time not only have to their credit an unequalled all-the-year-round climate and fertile soil, but advantages for home-making which can now only be found in cities.

At a mass-meeting at Mandeville last week \$500,000 were pledged toward the project long considered of connecting by a great causeway New Orleans and Mandeville, Abita Springs, Claiborne, Covington and other health resorts. The project is known as the "Orleans-St. Tammany Causeway," and involves the building of a bridge across Lake Pontchartrain. It is attracting lively interest of citizens of New Orleans and St. Tammany parish.

"A Policy and Not a Project."

By LEWIS M. HAUPT, C.E.

This motto of the National Waterways Congress was adopted for the purpose of cementing together the sectional elements which were strenuously advocating their local improvements and demanding national aid under the old regime, in which the delegations making the strongest claims or submitting the highest bids generally secured the bulk of the appropriations as the expense of the weaker contestants.

The result was disjointed improvements, neglect of important tributaries, meager appropriations, monopoly of transportation by hostile interests, inadequate protection of navigable channels, paralysis of local initiative and the injudicious expenditure of large sums upon illy-considered or inadequately-planned projects, affording little or no relief to navigation after many years of fruitless experimentation.

To relieve this unsatisfactory condition, extending over more than 40 years, the National Waterways Congress was inaugurated by some of the ablest and most progressive members of Congress, assisted by numerous civic associations previously organized for a similar purpose and seeking relief from the thralldom of the controlling interests.

With the hope that by a concerted effort much larger and more uniform appropriations might be secured from the National Treasury, the slogan of "A Policy and Not a Project" was made the war-cry, and the enthusiasm of all sections was enlisted to convoke the most impressive gatherings ever held in the national capital in behalf of the issue of bonds to the extent of \$500,000,000 to be applied at the rate of \$50,000,000 annually for the betterment of our domestic commerce and its dependent industries.

But with all this imposing demonstration and the educational propaganda which has followed in its wake the end has not yet been attained, for the odds are very great and the forces well entrenched and organized.

With the exception of the act of 1907,* amounting to about \$87,000,000, but little improvement has been made in the amount of the appropriations, and none in the manner of their distribution and application.

In fact, so tense has the situation become for definite and immediate results that the present administration has perforce modified its policy in such manner as to concentrate the available funds upon a few selected works already under contract in the hope that they may be finished within a reasonable time rather than the 50 or more years which the former policy would have required at the then current rate of progress, and to refuse national aid to new projects until the present ones were completed.

As there are reported to be over \$300,000,000 of approved projects on the tapis, the outlook for new work is very discouraging, as it is the policy of the Government to retain control of all waterways to the exclusion of State or local interests. This condition is the sequence of the indifference of the public to its own affairs, and results from the delusion that it is better to have the Government pay for the improvements from the public crib than to expend the local funds and secure immediate relief, as was the practice in the ante-bellum days.

The National Waterways Congress, under its active and zealous officials, has been doing excellent service along educational lines, and deserves the earnest sup-

*For an analysis of this Act see the MANUFACTURERS RECORD of April 4, 1907.

port and co-operation of all public-spirited citizens. Its monograph, recently issued under the caption of "The Waterways as Creators of Prosperity," over the signature of that master-mind, Mr. S. A. Thompson, should carry conviction to the hearts of the people as to the great superiority of water transportation over all others and its beneficial effects upon all kinds of industry. It is a prime factor in the welfare of the nation, forming the basis of its power and wealth, as the potent regulator of rates, and yet this same article furnishes the most convincing evidence of the obstacles which have so long barricaded the utilization of our waterways by denying to the people the appropriations so eagerly desired for their improvement. It shows clearly that there is a power interested in transportation at whatever "the traffic will bear," which has far greater revenues than all of those available for the conduct of the Government, and that this excess is rapidly increasing. It is therefore a simple proposition for this overwhelming capital, held together by community of interest and employing an army of dependents, to so direct and control the appropriations which emanate from a single central source, and which are so sensitive to local and sectional jealousies as to destroy their usefulness for the creation of the so-called "competing lines." Hence the passage of a river and harbor bill is intermittent and precarious, and its make-up is carefully adapted to the political atmosphere.

Thus for scores of years waterways of vital importance to the nation, and which have been constantly urged for immediate construction or enlargement, as the Atlantic coastwise canals and many others, have been systematically suppressed, and the improvement of many rivers connecting large industrial centers with the ocean have been "ham-strung" by dredging in one place and dumping in another for many years, so that the larger vessels have been forced out of commission; or bridges, whether stone or steel, without draws, have been permitted to be built across navigable streams, and local or State authorities have been denied their inherent rights to make their own improvements without first securing the consent of the executive departments in Washington, under the assurances that as soon as the tonnage will warrant the expenditure. But so long as the bars remain the tonnage cannot increase, and the port remains bottled up, and is subject to the overland rates.

Again, as has been frequently asserted, the General Government will do the work the supervision of these works is under the control of officials trained in the arts of war, appointed for life and not amenable to the electorate, yet who are, by virtue of their training and discipline, compelled to carry out the instructions of their superior officers, who may not be as familiar with the special features of their problems. Neither are they located at any one station, in general, long enough to complete the enterprise placed under their control, thus denying to them the honors and responsibilities of personal success in the prosecution of their work. If it fail, another is placed in command; if it succeed, another has the credit. In a recent important harbor work there have been no less than six assignments within seven years at that station, and it is hardly possible for the official to have visited the operations of his district more than once or twice during his term,

if indeed he had inspected some of them at all; yet, it is his opinion which carries weight as to the necessity for and character of the work to be done with his superiors and with Congress, and it is often vital to secure the re-election of the member.

These are the conditions under which our rivers and harbors are being improved, and the mere statement of them will suffice to explain why the results are so meager and the expenditures so large. It is this condition which the late distinguished chairman of the Senate Committee on Commerce denounced as the worst in the world, and it is evident that so long as it remains there will be little improvement in the waterways of the nation.

Numerous commissions have been sent abroad to study and report upon the systems there in operation, which have added so greatly to the commercial supremacy of those countries, and yet these lessons are not applied, since it involves a revolution in the methods of administration, which the powers that be are unwilling to relinquish. As stated by Mr. Thompson in his final paper, the British Royal Commission recommended:

"That a permanent 'Waterway Board' be created, which shall be made up, not of legislators with countless other calls upon their time, but of experts who shall give exclusive and continuous attention to its work. This board should be empowered to issue bonds to provide the needed capital; that all the inland waterways of the United Kingdom be acquired as speedily as possible and placed under the control of this board," etc.

But it is not within the scope of this paper to prepare a scheme for the organization of the efficient conduct of the public works of this great Republic. Such efforts have been carefully made and presented to Congress, where they are destined to failure, for the reasons already stated, and it will not be possible to restore the ante-bellum policy of local initiative under State control and regulation until the people realize that their personal interests will be best served by those who serve themselves and expend their own money in their own interests.

OKLAHOMA LEAD AND ZINC.

Rapid Development in the Miami District.

[Special Cor. Manufacturers Record.]

Miami, Okla., August 14.

Miami, in addition to being in the midst of a prolific agricultural section, is the center of a lead and zinc district not excelled, save by that of Joplin. The development of the mines is yet hardly begun.

The city, with an altitude of 801 feet, is on the Neosho River, at the junction of the Frisco and Oklahoma, Kansas & Missouri Railway. The business structures are solidly constructed, commodious, and, what is better, the people who occupy them are all, seemingly, on Easy street. Miami is the seat of Ottawa county, and its location at the very gateway to the new State naturally renders it a metropolis of North-eastern Oklahoma.

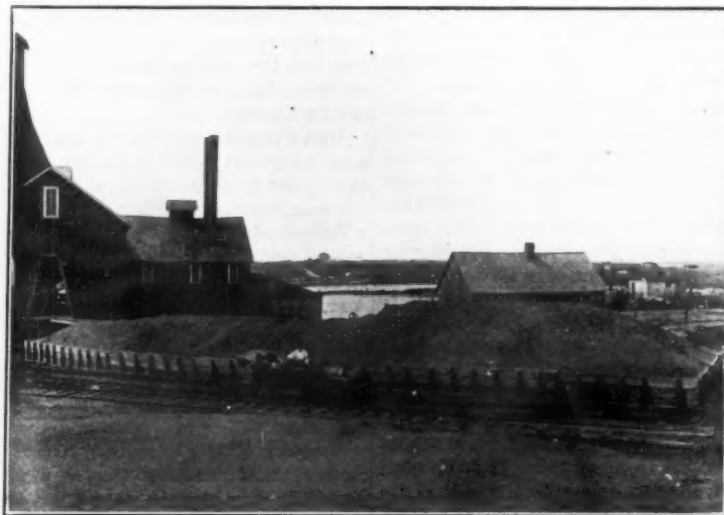
Miami's streets are well paved, and granitoid sidewalks cover over 20 miles. Water, light and fire protection systems are as nearly perfect as money, science and nature can make them. The water supply is derived from never-failing artesian sources, the gas is piped in from the Mid-Continent fields, while the electric plant is strictly up to date.

The membership of Miami's Commercial Club is made up of wide-awake business men, who have the interests of the city at heart and who lose no opportunity to advance them. At all times the club is ready and willing to consider applica-

tions for the establishment of meritorious enterprises and to offer most liberal inducements.

Only six years ago the site of the lead and zinc mines was a raw prairie, with no surface indications of ore within miles. Various reports concerning discovery have been broadly circulated, the popular one being that in sinking an artesian well lead and jack had been forced to the surface. The truth of the matter is that ore was first found by experienced prospectors who were looking for it.

On May 14, 1905, the first drill rig was set up on the level prairie north of Miami. Had surface conditions alone been considered this Miami district would today lie dormant, with Miami itself as a little trading post and water station upon the railway. The prospectors had the courage of their conviction, and were rewarded on July 15, 1905, by bringing to the surface from a depth of 175 feet rich examples of mineral, and since that time the progress made has been almost phenomenal. The mills have been multiplied and are being multiplied until the Miami field presents a scene closely approximating that shown in



the vicinity of Joplin. Every mill in the camp is paying dividends, with tons upon tons of ore piled up in reserve only awaiting a market to add to the dividends.

Until recently some doubt existed as to what levels lower than those that have been reached would show. This doubt has been dissipated, for only a few days before your correspondent reached Miami deeper drillings were made and rich ore was uncovered at each and every level. For this information the writer is indebted to Mr. George Coleman, president of the Miami Royalty Co.

With this story is shown a picture of the Turkey Fat mill and ore bin. In the bin are 1400 tons of zinc, which were produced within six months, practically without expense to the milling company, the lead produced at the same time covering the entire cost. No data was at hand covering the output of ores so far in 1911 in the Miami camp, but statistics show the output from January 1, 1910, to December 31, 1910, to have been \$680,823. The indications are that the output for 1911 will possible double that amount.

The development of the mines necessitated transportation, and this was furnished through the instrumentality of a home company, which built and equipped a suburban trolley line four miles in length.

Miami has two live daily papers and three weekly papers, three banks with \$500,000 deposits, with \$2,000,000 individual responsibility.

Taken all in all, Miami is a solid, prosperous city of possibly 6000 people, with such conditions surrounding as must nat-

urally develop her into one of the very important centers of the Southwest.

F. M. POSEGATE.

SHORTER COLLEGE PLANS.

Work Being Pushed in Constructing Its New Buildings.

[Special Cor. Manufacturers Record.]

Rome, Ga., August 3.

Since the city of Rome donated a beautiful site for its location Shorter College has great plans for future development, and when finished in every detail it will doubtless be one of the South's leading colleges for women. About the first of this year the city of Rome purchased the property and old buildings of Shorter College for the use of the public school system. For a certain monetary consideration and with the present site of the buildings that are being erected the deal was made. So work began this spring on the new buildings.

The building plans are made in accordance with the natural plan of development—on a large scale. There will be an administration building, music hall, academic building, dining-room and kitchen

cine through the main part of the college grounds to the administration building, thereby assuring the best facilities for getting back and forth to the city. The land that is now deeded over to the college embraces 155 acres.

All contracts of any consequence have been let up to date with the exception of the following: The kitchen furnishings, to cost between \$2100 and \$2500, and a complete pumping and water system. Bids are now being received by the president, Mr. A. W. Van Hoose, and will be for the next two weeks. ROY G. BOOKER.

CHARLOTTE'S WATER-WORKS.

Award of Contracts for Piping for the Extension.

[Special Cor. Manufacturers Record.]

Charlotte, N. C., August 26.

Bids were opened on Thursday by the Water Board for cast-iron piping and wooden piping to be used in the extension of the present water-works system to the Catawba River. Careful consideration was given to the bids for wooden piping, which were received from San Francisco, Cal., Portland, Ore., and New York.

The bids were held open until the following day, when it was decided to use only cast-iron pipe, three classes of which were bid on—class "A" pipe to weigh 204.2 pounds per foot, class "B" 233.2 pounds per foot and class "C" 279.2 pounds per foot, 24-inch pipe. The Glamorgan Pipe & Foundry Co., Lynchburg, Va., was awarded contract for three miles pipe, with the necessary specials, at \$22.73 per ton for A B and C pipe, and \$48 per ton for specials, one-half of 1 per cent. off for cash in 15 days; time of delivery, 10 weeks. The balance of the entire line from the river to the present pumping station was awarded to the U. S. Cast Iron Pipe & Foundry Co., Chattanooga, Tenn., at \$22.40 per ton for A and B; \$22.27 per ton for C (C pipe not to exceed one-half mile in length); \$50 per ton for specials; time of delivery, three months.

The other firms bidding were R. D. Wood & Co., Philadelphia, Pa.; A. Wyckoff & Sons Company, Elmira, N. Y.; Eastern Manufacturing Co., Elmira, N. Y.; Redwood Manufacturers' Co., San Francisco, Cal.; Pacific Tank & Pipe Co., Portland, Ore.

The engineer in charge, Mr. Gilbert C. White, is giving all matters personal attention, with headquarters in the Trust Building, and will push the work as rapidly as possible. The proposal columns of the MANUFACTURERS RECORD will be made use of for advertising from time to time whenever it is necessary in the construction of the water-works system.

As the site for power plant at the river has not yet been decided on, it is estimated that the line will be about nine miles in length, and that the cost for pipe will be approximately \$130,000.

J. LOUIS SPENCER.

Texas Commercial Secretaries.

The businesslike character of the Commercial Secretaries and Business Men's Association of Texas, reflected in the practical results from the work of that organization, is shown in a statement of its finances for nine months. The receipts from organizations in 70 cities represented and from the sale of its literature between November 1, 1910, and July 31, 1911, amounted to \$28,585.25, and the disbursements amounted to \$22,794.92. Of the total disbursements, only \$8,758.10 were for salaries and traveling expenses. More than \$6000 was spent for publicity material, with which the leading newspapers of the country have become very familiar in the past few months.

Cheap Cotton Disastrous.

HIGH PRICES ESSENTIAL TO THE MANUFACTURING INDUSTRY.

[Boston Evening Transcript, August 25, 1911.]

Richard H. Edmonds, editor of the *MANUFACTURERS RECORD*, while in Boston for a few hours today, in discussing the cotton situation, said:

"A permanently high price for cotton is essential to the best interests, if not to the very life, of the cotton-manufacturing industry. The manufacturers who are anxious to see lower prices by reason of the probability of a large crop this year are shortsighted. Low prices this year would inevitably drive cotton growers to other pursuits, and the smaller yield next year, with consequent abnormal high prices, would bring back all the evils from which the industry has suffered during the last few years in which it has had to contend with high cost of raw material and low price of finished goods.

"The world must adjust itself to paying a higher price for cotton goods. The sooner it is done the better it will be for all interests, and especially for the manufacturers. The time has passed when Southern farmers were compelled to raise cotton. In former years they were forced by necessity to raise cotton, and cotton alone. Conditions have changed. Unless prices be high, that is, high as compared with former years, they can make more money doing other things. There is no moral obligation to the world to compel them to raise cotton, though many people seem to think so.

"If New England could turn its cotton mills into shoe factories and double the profits on the investment, and pay better wages to the laborers, nobody would say that New England must continue to make cotton goods because the world needs cotton goods. Now the Southern farmer can do a dozen things more profitably than to raise and sell cotton at a low price, and even 10 and 11 cents a pound may now be counted as a low price. He can do things that he could not have done a few years ago. Industrial development is affording employment for thousands who were formerly compelled to raise cotton. Urban growth is drawing tens of thousands from the country into city activities. City growth and industrial development combined are making it possible for thousands to engage in diversified farming and truck growing to supply home needs.

"In the last 10 years industrial development in the South increased largely over 100 per cent., while its population increased only about 16 per cent. Thus industrial activity gained six or seven times as rapidly as population. The extension of railroad facilities to all parts of the South and the ever-increasing demand in the North and West for early fruits and vegetables make it possible for a very large number of Southern farmers to make more money in meeting these requirements than in raising cotton, even at 14 or 15 cents a pound. The South is now annually shipping to the North and West of fruits and early vegetables over \$100,000,000 worth.

"The development of transportation facilities throughout the South is making the extension of this industry possible in sections which were formerly compelled to raise cotton. Under such conditions the world might as well face the situation frankly and fully and understand its meaning. It is much safer for manufacturers to squarely face this condition than to blindly imagine that we can again go back to low-priced cotton over a long term of years. Last year the South's cotton crop, the seed included, was worth \$963,-

000,000. If the South, by raising a small crop, can sell it for such a figure, it is certainly not going to raise two or three billion bales more and sell it at two or three hundred million dollars less.

"Nearly three-quarters of a century ago a report made to the British Parliament advised the spinners of England to do all in their power to keep cotton at a low price, because, said this report, the farmers of America would undertake to so increase their production when prices were low as to get as much money in the aggregate as when prices were high. The English spinners have always gone on the principle that by forcing prices down they would increase the supply. Three-quarters of a century ago, and even up to a few years ago, that was the case. It is not so any longer. Conditions have absolutely changed. Economic development has made it possible for the South to turn its attention to other crops and to other activities which yield a far larger profit than cotton, unless cotton commands what manufacturers regard as a high price.

"If during the last few years the cotton manufacturers of this country had given more attention to educating the public to paying a higher price for cotton goods, instead of spending their time, as they have done, in seeking to put down the price of the raw material, the situation would have been far more favorable for them. Persistently claiming, as most of them have done, that prices of the raw material were too high, they convinced the buyers that cotton goods ought to decline in price, and therefore the price of the finished article continued low, while economic conditions forced an advance in the price of raw material. The speculators who were credited with being responsible

for these higher prices did not create these conditions. They only took advantage of the situation.

"The Southern Representatives and Senators who united a few days ago in urging Southern cotton growers not to sell at less than 13 cents a pound may be open to some criticism. They have been praying one way, that is, for higher prices, and voting another way. In the campaign for political capital, which has been so vigorously worked during the extra session, some of them have been doing as much as was within their power to injure business and thus to injure the cotton grower.

"It is possible that the depression in business, due in part to much of this unwise political capital making, will cause the South a heavy loss in its cotton, for if business were as prosperous as the natural conditions justify and as it would be but for the hampering legislation of the day, even a 14,000,000-bale crop would bring 14 or 15 cents a pound. The world needs a crop as large as that and could readily absorb it at a price as high as that.

"To the extent that the Southern Representatives who signed the call to Southern farmers to withhold their cotton, aided in such legislative activities as were planned not for the good of the country, but merely to make political capital, they will be responsible for the lower prices of cotton which Southern farmers may this year have to take. But, coming back to the question of the South's producing a supply of cotton sufficient for the world's increasing needs, the manufacturers of the world are vitally interested in establishing cotton growing on a basis so profitable as to insure continued increase in production, for otherwise we shall most certainly see a decline in the size of cotton crops and much higher prices than we have yet had, with all the attendant evils which have harassed the world's cotton-manufacturing interests of late years."

Iron and Steel Industries.

PRELIMINARY REPORT FOR 1909, ISSUED BY THE CENSUS BUREAU.

A preliminary statement showing the general results of the thirteenth census of establishments engaged in 1909 in the manufacture of iron and steel and comprising the four industries designated, respectively, as blast furnaces, steel works and rolling mills, wire and tin andterne plate, presents comparative statements of the quantity and cost of the principal materials used and the quantity and value of products manufactured for 1909, 1904 and 1899 censuses.

Pig-Iron.

There were 208 establishments engaged in the manufacture of pig-iron in 1909, a decrease of 16 from the number reported in 1899, but an increase of 17 over the number of active establishments in 1904. The iron and steel industry in 1904 was seriously affected by the general business depression which began in 1903, whereas both 1909 and 1899 were prosperous years. The capital reported in 1909 was \$487,581,000; in 1904, \$236,401,000, and in 1899, \$143,329,000, an increase of 106.3 per cent. for 1904-1909 and of 64.9 for 1899-1904. The employees, including salaried officials, clerks and wage-earners, in 1909 numbered 43,013; in 1904, 37,414, and in 1899, 41,121, an increase of 15 per cent. for 1904-1909 and a decrease of 9 per cent. for 1899-1904.

The pig-iron product in 1909, including ferro-manganese, ferro-silicon, spiegel-eisen, etc., was 25,652,000 tons, of a value of \$387,830,000; in 1904, 16,628,000 tons,

of a value of \$228,978,000, and in 1899, 14,452,000 tons, of a value of \$206,579,000, an increase of 54 per cent. in tonnage and 69 per cent. in value for 1909 over 1904, and 78 per cent. in tonnage and 88 per cent. in value for 1909 over 1899. There was charged into the furnaces 56,337,000 tons of ore, mill cinder and scrap, 13,571,000 tons of flux and 29,258,000 tons of fuel in 1909, compared with 26,976,000 tons of ore, mill cinder and scrap, 7,327,000 tons of flux and 16,697,000 tons of fuel in 1899, showing an increase for the decade of 87 per cent. for ore and 75 per cent. for fuel. The cost of these materials was \$311,043,000 in 1909, \$174,493,000 in 1904 and \$118,962,000 in 1899, showing an increase for the decade of 162 per cent. On account, however, of differences in method of reporting freight on materials at the several censuses, the statistics in regard to cost of materials are not strictly comparable.

The heavy growth is in coke furnaces, pig-iron made with bituminous fuel increasing for the decade from 12,254,000 to 24,609,000 tons, or 101 per cent., and in value from \$173,763,000 to \$369,684,000, or 113 per cent., whereas the increase in charcoal pig-iron is small, and pig-iron made with anthracite coal and coke mixed or with anthracite coal alone has decreased largely. The average value of the pig-iron made per ton was \$15.15 in 1909, compared with \$14.29 in 1899.

Of the 1909 product, 15,858,000 tons, or

62 per cent., was produced for consumption in the works of the producer, chiefly in steel converters or furnaces, compared with 9,923,000 tons, or 69 per cent. of the product in 1904. Like data for 1899 are not available. Of the pig-iron produced for such consumption, 12,198,000 tons, or 77 per cent., was delivered in a molten condition, compared with 5,890,000 tons, or 59 per cent., in 1904.

The active establishments reported 388 completed furnaces, with a daily capacity of 101,267 tons in 1909, compared with 343 with a capacity of 54,425 tons in 1899, an increase for the decade of 13 per cent. in number and 86 per cent. in capacity. In 1909 there were 11 furnaces of 3807 tons daily capacity completed during the year; in 1904, 17 furnaces of 6085 tons capacity, while the number completed in 1899 was not reported. There were in course of construction at the end of the year 10 furnaces of 4100 tons daily capacity in 1909, 4 of 1375 tons in 1904 and 16 of 7275 tons in 1899. The number of furnaces in active establishments which were idle during the entire year was, in 1909, 24 of 4027 tons daily capacity; in 1904, 26 of 4296 tons capacity, and in 1899, 18, the capacity of which was not reported. Three furnaces of 710 tons daily capacity were abandoned or dismantled by active establishments in 1909, and 4 of 1035 tons capacity in 1904.

Steel Works and Rolling Mills.

There were 446 establishments in 1909 equipped for the manufacture of steel or for the hot rolling of iron or steel, compared with 415 establishments in 1904 and 445 in 1899. The capital reported in 1909 was \$1,004,735,000; in 1904, \$700,182,000, and in 1899, \$430,232,000, an increase of 43.5 per cent. for 1904-1909 and of 62.7 for 1899-1904. The employees, including salaried officials, clerks and wage-earners, in 1909 numbered 260,123; in 1904, 221,892, and in 1899, 190,703, an increase of 17.2 per cent. for 1904-1909 and of 16.4 per cent. for 1899-1904. The products of these establishments amounted in value to \$985,723,000 in 1909, \$673,965,000 in 1904 and \$597,212,000 in 1899, an increase in value of 46 per cent. for the period 1904-1909 and 63 per cent. for the decade.

The principal materials used amounted in value to \$529,952,000 in 1909, compared with \$364,475,000 in 1904 and \$322,269,000 in 1899, an increase for the decade of 64 per cent. The chief item is pig-iron, of which there was consumed 19,077,000 tons, costing \$297,471,000, in 1909, compared with 12,191,000 tons, costing \$172,102,000, in 1904, and 10,410,000 tons, costing \$151,042,000, in 1899. The above figure for the 1909 consumption of pig-iron includes 365,000 tons of spiegel-eisen, ferro-manganese, ferro-silicon and other ferro-alloys, costing \$14,807,000, the ferro-alloys consumed in 1904 and 1899 being included under "pig-iron," but not reported separately.

The rolled, forged and other classified iron and steel products in 1909 aggregated 26,639,000 tons, compared with 18,217,000 tons in 1904 and 15,056,000 tons in 1899, an increase for the decade of 77 per cent., the value of the same for the several years being as follows: 1909, \$861,165,000; 1904, \$585,288,000, and 1899, \$510,906,000, an increase for the decade of 69 per cent.

There has been very heavy growth in certain of the rolling-mill products, notably in wire rods, the output of which increased from 917,000 tons in 1899 to 2,295,000 tons in 1909, or 150 per cent.; structural steel, from 857,000 tons in 1899 to 2,124,000 tons in 1909, or 148 per cent.,

and plates and sheets, not including black plates or sheets for tinning, from 1,488,000 tons in 1899 to 3,333,000 tons in 1909, or 124 per cent.

There was sold direct for export, by the establishment producing, 868,000 tons of rolling-mill products, the chief items in order of tonnage being rails, pipes and tubes, sheet and tinplate bars, plates and sheets, galvanized plates and sheets, structural shapes, bars and rods, rail fastenings, wire rods, blooms, billets and slabs, and skelp.

Steel Production.

The total production of steel ingots and castings, including that of 24 establishments equipped for the manufacture of steel, but engaged primarily in the manufacture of other products, was 23,523,000 tons with a value of \$482,947,000 in 1909, compared with 13,671,000 tons and a value of \$261,232,000 in 1904 and 10,685,000 tons and a value of \$212,539,000 in 1899, an increase for the decade of 120 per cent. in tonnage and 127 per cent. in value. In 1899 Bessemer steel formed 70 per cent. of the steel production, and although it still exceeded in quantity all other steels in 1904, yet it only constituted 57 per cent. of the total; during the decade ending with 1909 the production increased 22 per cent. In 1909 the production of open-hearth steel was 14,212,000 tons, and formed 60 per cent. of the steel production. The heavy growth has been in basic open-hearth steel, which increased from 2,154,000 tons in 1899 to 13,221,000 tons in 1909, an increase for the decade of 514 per cent. During the same period acid open-hearth steel increased 11 per cent., and crucible and miscellaneous steels 6 per cent. The steel production includes, for 1909, 549,000 tons of direct castings of a value of \$42,607,000; for 1904, 292,000 tons, valued at \$29,947,000, and for 1899, 177,000 tons, valued at \$14,610,000, the balance being ingots. All but a small portion of the ingot product is consumed in the producing plant, the amount for sale or transfer to other works of the company producing being, in 1909, 144,000 tons, of which 31,000 tons was for sale and 113,000 tons for transfer to other works of the producing company. In 1904 the tonnage sold or transferred to other plants was 196,000 tons, and in 1899, 104,000 tons, but a segregation between ingots sold and ingots transferred was not made. The product includes 13,000 tons of steel made in electric furnaces.

Of the 1909 product, 523,000 tons of open-hearth steel was partly purified in Bessemer converters before finishing in open-hearth furnaces.

A production of 162,000 tons of alloyed steel was reported in 1909, of which 152,000 tons was ingots and 10,000 tons castings, distributed by kind as follows: Bessemer, 45,000 tons; open-hearth, 104,000 tons, and crucible and miscellaneous, 13,000 tons.

The daily capacity of rolled iron and steel on double turn, of the rolling-mill establishments was 150,000 tons in 1909, 106,000 tons in 1904 and 87,000 tons in 1899, an increase for the decade of 73 per cent. The capacity of the steel furnaces on double turn increased for the decade 102 per cent., the daily capacity being 109,000 tons in 1909, 76,000 tons in 1904 and 54,000 tons in 1899; this includes converters and open-hearth and crucible furnaces. The heavy increase has been in basic open-hearth furnaces, which have increased in number from 168 in 1899 to 549 in 1909, and in capacity from 12,000 tons to 55,000 tons, an increase in number of 227 per cent. and in capacity of 355 per cent. The acid open-hearth furnace equipment is essentially the same as it was at the beginning of the decade. Converters

increased for the decade 41 per cent. in number and 32 per cent. in capacity, while the crucible-furnace equipment increased 46 per cent. in capacity.

The Wire Industry.

The total value of the products of the wire industry was \$167,709,000 in 1909, about equally divided in value between mills drawing wire from purchased wire rods and the wire departments of rolling mills which roll wire rods, viz., \$84,486,000 and \$83,223,000, respectively. Figures available for 1904 and 1899 are not fully comparable. Not including establishments drawing wire from purchased rods and making entire product into nails or other wire fabrications, the value of products was \$112,719,000 in 1904 and \$57,150,000 in 1899, the latter figure, however, not including the copper, brass and other metal-wire products of the wire departments of iron and steel rolling mills, which was not relatively a large item.

The capital reported in 1909 was \$60,157,000; in 1904, \$14,839,000, and in 1899, \$4,242,000, an increase of 303.8 per cent. for 1904-1909 and of 251.2 per cent. for 1899-1904. The employees, including salaried officials, clerks and wage-earners, in 1909 numbered 19,931; in 1904, 5318, and in 1899, 1697, an increase of 274.8 per cent. for 1904-1909 and of 213.4 per cent. for 1899-1904.

There was consumed by the wire mills of the country 2,646,000 net tons of wire rods in 1909, costing \$101,620,000, distributed according to metal, as follows: Steel, 2,515,000 tons, costing \$67,440,000; iron, 4000 tons, \$183,000; copper, 126,000 tons, \$33,733,000, and other metal, chiefly brass, a little less than 1000 tons, \$264,000. Of this material, 955,000 tons was used in wire mills that purchased the wire rods and 1,691,000 tons by the wire departments of rolling mills. There was also used by the wire mills 58,000 tons of purchased wire.

The wire industry in 1909 includes wire and products of wire to the value of \$161,049,000, and other products to the value of \$6,660,000. There were drawn in the aggregate 2,514,000 tons of wire, of which iron and steel constituted 2,389,000 tons; copper, 124,000 tons, and brass, bronze, white metal, etc., 900 tons, the latter being chiefly brass. The iron and steel wire products amounted in value to \$120,533,000, of which \$72,599,000 was the product of the wire departments of rolling mills and \$47,934,000 was produced by wire mills which did not operate wire-rod trains. The copper product was of the value of \$40,032,000, of which \$30,832,000 was by mills purchasing wire rods and \$9,200,000 was the product of the wire department of rolling mills. Wire products of brass, bronze, white metal, etc., amounted in value to \$484,000. The equipment of the establishments, 1909, comprises 42,799 wire-drawing blocks, of which 21,081 were reported in kind (rod, 4265; redrawing, 7043, and fine wire, 9773) and 21,718 with kind not reported, with a total annual capacity of 3,146,000 tons; 4428 wire-nail machines with an annual capacity of 18,757,000 kegs, and 446 woven-wire fence machines with an annual capacity of 481,000 tons of fencing.

Tin and Terne Plate Industry.

There were 31 establishments reporting the dipping of tin and terne plates in 1909, compared with 36 in 1904 and 57 in 1899; of these, 5 in 1909, 9 in 1904 and 22 in 1899 purchased their black plates, the balance rolling them. The capital reported in 1909 was \$10,995,000; in 1904, \$10,813,000, and in 1899, \$6,650,000, an increase of 1.7 per cent. for 1904-1909 and of 62.6 for 1899-1904. The employees, including salaried officials, clerks and wage-earners, in 1909 numbered 5845; in 1904,

5131, and in 1899, 4004, an increase of 13.9 per cent. for 1904-1909 and of 28.1 per cent. for 1899-1904. There was used as material in 1909 black plates and metal for coating with a cost of \$38,651,000, compared with \$30,068,000 in 1904 and \$25,596,000 in 1899, an increase for the decade of 51 per cent. This material included 1,321,072,000 pounds of black plates or sheets with a cost of \$28,981,000 in 1909, 1,019,609,000 pounds with a cost of \$22,992,000 in 1904, and 827,916,000 pounds, costing \$20,669,000, in 1899, an increase for the decade of 60 per cent. in quantity and 40 per cent. in value. There was used in coating 31,078,000 pounds of tin, costing \$9,236,000, in 1909, compared with 20,283,000 pounds, costing \$4,528,000, in 1899, and 9,850,000 pounds of lead, costing \$434,000, in 1909, compared with 6,871,000 pounds, costing \$399,000, in 1899. These figures include the tin and lead contents of terne mixture purchased as such, of which, in 1909, there was purchased 9,633,000 pounds, at a cost of \$1,062,000. In addition to the foregoing, there was consumed 8,032,000 pounds of black plates and 388,000 pounds of coating metal by three establishments engaged primarily in the manufacture of other products.

The value of the products of the tin and terne dipping plants in 1909 was \$47,970,000; in 1904, \$35,283,000, and in 1899, \$31,892,000, an increase for the decade of 50 per cent. In addition there was manufactured for consumption and sale by three establishments engaged primarily in the manufacture of other products, tinplate, terneplate and other sheet iron or sheet steel tinned or terne-plated products of a value of \$399,000.

PRICES FULLY MAINTAINED.

Small Tonnage of Pig-Iron Sold in Birmingham Market.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., August 28.

The sales of pig-iron in this market during the past week involved a small tonnage comparatively, but prices have been fully maintained. A very satisfactory movement from all furnace yards was reported for the week, and some increase in the actual melt has been noted. At this time a fairly attractive tonnage is represented by the inquiries for earloads and lots of 100 to 150 tons each for prompt shipment, and a lot of 1000 tons for delivery over the remainder of the year is pending. It is probable that the tonnage recently sold and the inquiries now pending cover a wider range of territory than would be covered under ordinary conditions, but practically all lines of the foundry trade is represented to some extent in negotiations under way, and accordingly general conditions of the trade are considered good. Some report has been made of requests that shipment against contracts be withheld, and small lots of resale iron have been heard of. These conditions, however, are attributed to the disposition that prevailed to speculate when a \$10 per ton Birmingham basis was obtainable, and are not wholly unexpected.

The late announcement that a certain large merchant interest quietly acquired some 40,000 to 50,000 tons of local iron at the \$10 schedule is a very encouraging development, and can only be taken as further indication that even the best posted authorities have confidence in the market's strength. Of course, from a producer's standpoint, the placing of a large tonnage in the hands of speculators for resale is never looked upon with favor, yet such transactions are often very effective in the maintenance of higher asking prices. The trade generally is apparently content

to await further developments in the matter of prices for deliveries after January 1. There has been some inquiry for such delivery, and selling agents contend that a very large tonnage is still to be provided against requirements during the last quarter. For last quarter deliveries the \$10.50 per ton Birmingham schedule is understood to correctly represent the market, although all producing interests are not solicitous of orders at that figure. It is believed that the stock returns of September 1 will to an appreciable extent affect quotations for last quarter shipments, and will more or less determine the policy of the several producing interests as to first quarter commitments. With the blowing in of two furnaces by the Tennessee Coal, Iron & Railroad Co. during this month the number of active stacks in this State is now 19, of which 5 stacks are being operated on basic iron. The number of active stacks will probably not be increased for at least 60 to 90 days, but repairs at two plants are well under way, and three additional stacks will be ready for operation by October 1. The market is quoted as correctly represented for deliveries during the remainder of the year at \$10.50 per gross ton at Birmingham for No. 2 foundry, with a differential of 50 cents per ton for Nos. 3 and 4 foundry.

In the cast-iron pipe industry some 3500 tons of water pipe for prompt delivery was placed during the past week. This tonnage was required for St. Louis, Mo., San Diego, Cal., and Southern Texas points. At this time a round lot is being considered for lower California, and several small lots for municipal purposes in the Middle West have been submitted. Local plants are well supplied with orders, and are disposed to ask prohibitive prices for certain sizes. The market is quoted for class "B," or water pipe, as follows per net ton f. o. b. cars here: Four-inch to six-inch, \$23; 8-inch to 12-inch, \$23; over 12-inch, average \$21, with \$1 per ton extra for class "A," or gaspipe.

The consumption of old material in the Southern territory has increased very materially during the week, but so far prices have not been affected. Mention is made of the sale of 100 to 200 tons of steel scrap for immediate shipment, and several carloads of light cast and machinery scrap. The prices received in the transactions reported are considerably at variance. The market is quoted nominally with dealers' asking prices as follows per gross ton f. o. b. cars here, viz.:

Old iron axes, standard, \$15.50 to \$16.
Old iron axes, small, \$12 to \$13.50.
Old steel axes, light, \$13 to \$13.50.
Old steel axes, standard, \$14 to \$14.50.
Old iron rails, \$13 to \$14.
No. 1 railroad wrought, \$11.50 to \$12.
No. 2 railroad wrought, \$8 to \$8.50.
No. 1 country, \$7 to \$7.50.
No. 2 country, \$6.50 to \$7.
No. 1 machinery, \$8.50 to \$9.
No. 1 steel, \$9 to \$9.50.
Standard car wheels, \$11 to \$11.50.
Tram car wheels, \$8 to \$8.50.
Light cast and stove plate, \$7 to \$7.50.

The resumption of operations in all departments at the plant of the Southern Iron & Steel Co. at Alabama City, Ala., during the past week is an item of especial interest in the local industrial situation. It is announced authoritatively that a good volume of orders is now actually in hand, and that unless some unforeseen development prevent, the operations will be steady for some months, at least. The blast furnace of the Southern Iron & Steel Co. at Alabama City will be put in blast as soon as the installation of a new blowing engine is finished, to supply basic iron for the steel plant. As this furnace is only operated to supply the steel plant, the resumption will, of course, have no

affect on the pig-iron market. No announcement has been made as to the probable date the Trussville furnace of the Southern Iron & Steel Co. will be put into blast, and by reason of this, and the fact that the Chattanooga, Tenn., plant remains idle, that concern's mining operations are still very limited.

ADA'S WATER-WORKS.

Power and Supply from a Common Source.

[Special Cor. Manufacturers Record.]

Ada, Okla., August 23.

The water-works system of this city is to be completed by August 30. The source of supply is a cold spring at Byrd's Mill, in the southern part of Pontotoc county, 12 miles south of Ada. The spring, undoubtedly of artesian origin, emerges through fissures which cover an area of about 60x120 feet, and is at an elevation of 1020 feet above the sea level. The volume of water from the spring is 6,100,000 gallons per 24 hours, which is sufficient to supply a city of 61,000 inhabitants with 100 gallons per capita per day.

The flow of this magnificent spring has been so utilized by the engineers that it not only furnishes the water required by Ada, but furnishes the power required to pump this water through 12 miles of 12-inch pipe line and deliver it into an elevated water tower on a high hill in the city, from whence it is distributed by gravity over the entire city at a pressure sufficient for domestic use and for fighting ordinary fires. The elevation of the top of the water tower in Ada is 120 feet higher than the spring, and, together with the friction losses on the pipe line, make this pumping necessary. All the water that flows from the spring is used to develop power with the exception of that portion which is taken by the pumps from the 30-inch pipe just before it reaches the turbines, and which is pumped to the city.

The pumps and turbines are in duplicate, and each unit is capable of delivering 900,000 gallons of water per day to the water tower. The pumps and turbines are installed in buildings constructed of reinforced concrete throughout, and practically the only expense connected with the operation of this pumping plant, which runs day and night, is the salary of one attendant, whose principal work consists in oiling the pumps and turbines about once a day.

The 12-inch pipe line, 12 miles long, by which the water is brought from the pumping station to the city, is steel, and as each section of pipe is tested to a pressure of 500 pounds per square inch, there is but little danger that the water supply will ever be endangered by this pipe bursting or breaking.

To guard any such possible contingency, and at the same time to afford a greater measure of fire protection than that provided by the water tower, a reinforced concrete reservoir with a capacity of 750,000 gallons is located on the highest point in the city, which is near the water tower, and about one-half mile from the business center of the city.

The pipe connections are so arranged that the water as it is delivered from the pump at the spring is first pumped into the water tower, which is kept full all the time.

As the water from the spring comes in at the rate of 900,000 gallons per day, there is a considerable surplus over the amount required to keep the water tower full, and this surplus overflows from the water tower and keeps the reservoir full all the time and also keeps the water in the reservoir in circulation, so that it is always fresh and clean.

The overflow from this reservoir is fur-

ther utilized by being conducted to an artificial lake which was formerly a part of the water-works system, but has since been converted into a fishing and pleasure resort.

Housed in a fireproof building adjacent to the storage reservoir is an underwriters' standard centrifugal motor-driven fire pump, with a capacity of 1000 gallons per minute against 100 pounds pressure.

The pumps and water tower connections are so arranged that when a fire alarm is turned in at the City Hall fire station the firemen, on throwing a switch, shut off the water tower and start the fire pump, and inside of 30 seconds have 100 pounds fire pressure anywhere within the city limits. The fire pump takes its water supply from the storage reservoir, which holds sufficient water to furnish four heavy streams for a period of 12 hours.

The mains throughout the city are of ample size and the fire hydrants are so distributed that good fire protection is afforded every part of the city, and as a result low insurance rates are obtained. At the same time the health of the city is safeguarded by an abundant supply of absolutely pure water, while the various manufacturing industries of the city are not handicapped by the periodical shortage of water, which is an unfortunate characteristic of many other cities.

The cost of building and developing this water supply, together with the reservoir and some additions to the distribution system, was \$150,000, which, together with previous expenditures, represents a total cost to the city of \$200,000 for its water-works system.

Home products entered largely into the construction, and the Portland cement used was manufactured by the Oklahoma Portland Cement Co. of Ada. The plans for the improved water supply were prepared by Goodwin & Harper, consulting engineers, of Kansas City, Mo., and the work installed under their general supervision.

ACTIVITY IN RECLAMATION.

Drainage Work in Louisiana Wet Lands.

Mr. O. W. Crawford of the Louisiana Farm Land Co., New Orleans, writing to the MANUFACTURERS RECORD in regard to a brief review in our last issue of the development of the territory around Paradis, La., says:

"There is at this time three dredges at work—two on the Paradis property and we have one on Black Prince Island, which adjoins the Paradis property. There are now four dredges at work on that prairie almost in sight of each other, and two large pumps have been installed within the last 60 days—one on the Des Allemands prairie, with two 24-inch intakes, and one on the St. Charles Land Co.'s property, with two 36-inch intakes.

"When I look back and see that it is now nearly five years since I went first to Paradis to see if there was anything there worth considering, I am gratified at the amount of development which I have succeeded in establishing in St. Charles parish. At that time there was not any public work or development work whatever in the parish south of the river. Since that time I have succeeded in selling two large tracts, the first and second time, and one of them has just been resold at a very large advance over the last sale. I refer to the Paradis property. The first sale was at \$16 an acre, the next at \$21 an acre and the last was at \$25 an acre, as the records show. This was a tract of 15,000 acres.

"I sold a tract of 13,800 acres to the St. Charles Land Co., and it has now 3000 acres almost entirely reclaimed, and much

of that has been sold at from \$75 to \$100 an acre.

"The Des Allemands Land Co., which is one of Mr. Wisner's operations, has finished the dredge and canal work on a tract of 2500 acres, and is now pumping the water preparatory to putting in the lateral ditches. This land it intends to get ready for cultivation next year.

"Brady & Crawford have a dredge working on Black Prince Island, and they intend to canal this and pump it for cattle and hog raising.

"In all, 20,000 acres of wet prairie land in St. Charles parish, all contiguous to Paradis, is rapidly being drained and reclaimed. In addition to this, there is a very large canal being dug by timber parties from McWilliams property east toward New Orleans, which will give a short canal navigation route to New Orleans for the Paradis vicinity. This canal is being dug 60 feet wide and 8 feet deep, and will be finished so that it can be used by our community within the next 60 or 70 days. I thought you might be interested in knowing all these things."

FOR INDUSTRIAL DEVELOPMENT.

Plans at Charlotte to Attract More Factory Concerns.

[Special Cor. Manufacturers Record.]

Charlotte, N. C., August 28.

A special meeting of the Greater Charlotte Club was held a few days ago to consider organizing the Industrial Development Co. of the Greater Charlotte Club, and to have a president, vice-president, secretary and treasurer, and a board of 18 directors to be composed of six bankers, six real estate men and six other business men. The capital stock is to be \$50,000.

It is suggested that 100 men take five shares of stock each, and that the money for same be paid in instalments of 10 per cent, at intervals of 60 days until the total amount be paid. This stock is to be subject to the call of the board of directors, and the money is to be used exclusively in securing of and investment in new small industries for Charlotte. It is understood that not more than one-fifth of the capital shall be called for at one time, limiting the amount to be invested in any one concern to \$10,000, and this to be done only after a committee has carefully investigated the new proposition and their reports favorably acted upon by the entire board of directors.

In order that these small industries may be properly taken care of, an industrial building is suggested, so that sufficient floor space may be had at reasonable rental and the opportunity to buy heat, light and power at moderate prices be given. A site for this industrial building has already been donated by Mr. W. S. Alexander of the Southern Real Estate Loan & Trust Co., and it is proposed that the first call made by the board of the Industrial Development Co. be for one-fifth of the capital stock, to be divided into two instalments and the money secured be used in the erection of a building.

In order to work out the details a committee was appointed consisting of Dr. A. D. Glascock, chairman; F. C. Abbott, John A. McRae, H. M. Victor and E. M. Cole.

Practically all lines of business were represented at the meeting, and among those present were E. A. Cole, H. M. Victor, A. L. Smith, F. D. Lethco, Dr. I. W. Faison, J. A. McRae, Dr. C. L. Alexander, W. H. Wood, Robt. Glasgow, F. C. Abbott, W. P. Bear, W. F. Harding, J. A. Houston, W. T. McCoy, C. G. Creighton, W. R. Wearn, A. D. Glascock, H. G. Rogers, J. J. Breen, Cyril G. Smith, C. W. Parker, W. R. Foreman, J. B. Alexander, Dr. Wm. Allan, R. K. Blair, J. G. Baird, H. W. Eddy, J. W. Ferguson, J. A.

Fore, J. O. Gardner, J. W. Lewis, M. C. Mayer, E. P. Griffith, W. L. Nicholson, E. L. Propst and C. Valaer. Mr. Clarence O. Kuester is president, and W. T. Corwith secretary of the Greater Charlotte Club. J. LOUIS SPENCER.

WEST VIRGINIA PEACHES.

Interesting Facts About One of the Pioneer Growers.

Board of Trade,

Winston-Salem, N. C., August 19.

Editor Manufacturers Record:

Having read with much interest the article appearing in your issue of August 17 by Mr. Wm. H. Stone on "Rich Resources of Some West Virginia Counties," I have some additional information which may be of interest to you relative to the early history of fruit-growing in Hampshire county, West Virginia.

From 1888 to 1904 I was in the employ of Mr. I. H. C. Pancake at Romney, W. Va., in the capacity of clerk in his store, where I took my first business training. Mr. Pancake had a large business, and carried a general line. One of his customers, Mr. J. J. Roderick, owed Mr. Pancake an account of \$850 or thereabout. I do not recall the exact figures. One day Mr. Roderick came in the store, having suffered considerable losses, as he was engaged in other lines of business as well as farming, and informed Mr. Pancake that the only way he would be able to settle his account was to make him a deed for an old hill farm he owned about four miles from Romney. The land was so poor and worn out that nothing was being raised or growing upon it, and Mr. Pancake told Mr. Roderick that he would rather lose the account than to pay taxes on the land or undertake to make it productive, but Mr. Roderick, being an honest man, said that it was the best he could do, and that he was going to make that deed to him. Soon after receiving the deed Mr. Pancake took a trip through Eastern Tennessee, Georgia, North and South Carolina, Virginia and Eastern Maryland, and became convinced of the fact that the farm that he had just received deed for must be near the peach belt, and he proceeded to set out a limited number of trees, adding a few each year.

The third year that the trees began bearing he had, I think, about 1700 baskets of fine looking peaches. Being new in the business and desiring to know whether the fruit was of commercial value, he secured the names of a number of commission merchants in the large cities and made shipments of from two to five baskets, stating that he had just started in the business in a limited way and wanted to know before proceeding further whether peaches grown in that section were desirable for the best markets.

He stated that he was making no bills, but that they could remit whatever the fruit was worth, if it was worth anything at all. He received remittances of good prices for every basket shipped, and the following season the same commission merchants sent their men there to buy his crop, stating that the flavor of the peaches was one of the best that came on the market. From that time to this the industry has grown, other large companies have been organized and the farmers in the surrounding country have cleared off whole mountain sides, which are now bringing anywhere from \$500 to \$1000 an acre, which had no value until set out in bearing fruit. Solid trainloads of peaches are shipped from Romney to other cities for distribution.

Mr. I. H. C. Pancake was the pioneer of the peach business in Hampshire county, and I desire to have the history of the industry kept straight, knowing the

conditions while living there, and my father's family rented a 1300-acre farm on the South Branch of the Potomac adjoining two of these orchards.

J. S. KUYKENDALL, Secretary.

JOPLIN'S RAPID GROWTH.

The Center of Zinc and Lead Mining Industry.

[Special Cor. Manufacturers Record.]

Joplin, Mo., August 12.

Joplin is so well known as the very center of the great lead and zinc producing section not only of the Southwest, but of the country, as to require nothing more on that score than a mention of the fact that, seemingly, the more ores are extracted the more remains to be extracted, and, with respect to producing territory, as great as it now is, prospecting and development is constantly extending it. As a mining center the position of Joplin is assured for the coming century at least.

To the man, however, who knew her only a few years since as a mere mining camp, Joplin's progress appears marvelous. It is today an up-to-date modern city of possibly 40,000 people, possessed of every public utility, abounding in churches, schools, beautiful homes, massive business structures and first-class hotels. In addition to all these, the city is fast merging into a jobbing and manufacturing center that, unless all indications fail, will at an early day give it enviable rank in these lines.

Joplin, Webb City, Cartersville and Carthage, in Jasper county, are connected by an interurban line, traversing a section not exceeded for beauty and fertility by that of any other in the State. Webb City and Cartersville are primarily mining towns, though their homelike conditions, well-paved streets, splendid sidewalks, substantial business structures, handsome churches and commodious schoolhouses remove them very far from the usual surroundings of mining camps.

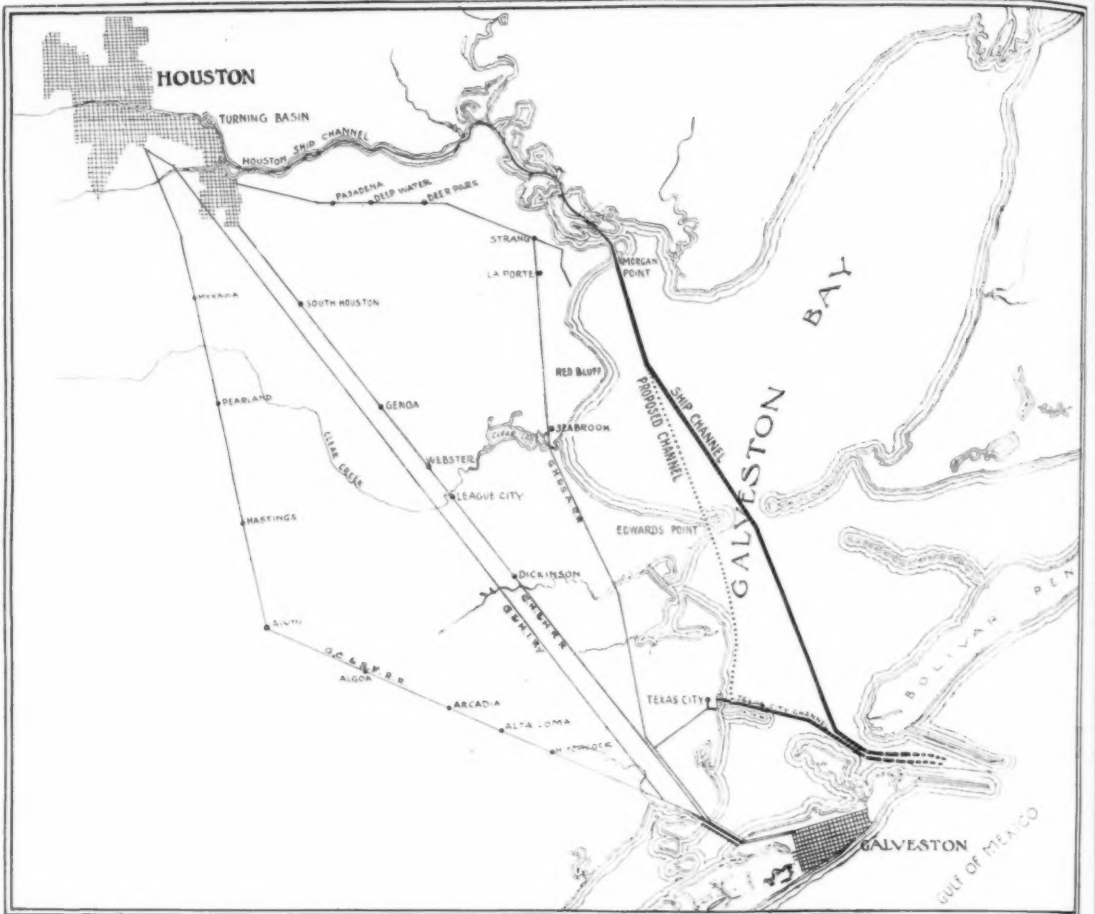
Carthage, the seat of the county, is beautiful. Its main industry is based upon inexhaustible deposits of building stone, which abound in the immediate vicinity. The uses to which this stone is put is most splendidly exemplified in the county courthouse and other public and private structures. The fame of Carthage stone has spread far and wide, and its merit gives it a market in all sections of the country. Carthage is a city of homes, of churches and schools; a city in which capital can be invested with safety and the homeseeker can find the most favorable conditions.

F. M. POSEGATE.

Greensboro.

The Chamber of Commerce of Greensboro, N. C., is circulating statistics showing that since 1900 the city government has spent \$360,815 upon water-works, \$43,000 for a City Hall, \$41,000 for school buildings, \$36,000 for paving and \$30,000 for fire department; that the value of real and personal property has increased from \$3,061,428 to \$8,600,000, and that the annual expenditures for buildings have increased from \$125,000 to \$321,840. In the same period the taxable values of property in Guilford county have increased from \$9,070,079 to \$22,778,520.

A telegram from Oklahoma City says that negotiations are under way for the acquisition of the Oklahoma Central Railway by the Oklahoma Railway Co., which owns the street-car lines in Oklahoma City and vicinity as far as Moore. The Oklahoma Central operates from Chickasha to Colegate, and may be utilized for part of an electric interurban railway which is projected by the owners of the Oklahoma Railway.



MAP SHOWING PRESENT ROUTE AND PROPOSED ROUTE OF SHIP CHANNEL CONNECTING HOUSTON AND THE GULF OF MEXICO.

THE HOUSTON SHIP CHANNEL.

Proposed Shortening of the Route to the Gulf.

[Special Cor. Manufacturers Record.]

Chamber of Commerce,

Houston, Tex., August 22.

Major George P. Howell, United States engineer for this district, stationed at Galveston, has filed with the War Department recommendations to govern the work of improvement of the Houston Ship Channel, 48 miles, from Houston to the Gulf of Mexico. The recommendations of Major Howell contemplate shortening the route, providing means to guard against washing of silt into the channel from cross seas and currents.

At present the channel, with a maximum depth of 18 feet, runs through old Buffalo Bayou to San Jacinto Bay at Morgan Point. From this point it cuts directly through the center of the bay to Galveston Bay, where it enters the Galveston channel. Through a greater part of San Jacinto Bay it is necessary to maintainrevetment work to retain a clean channel.

To obviate this difficulty Major Howell recommends that the channel follow the shore line from Morgan Point to Edward's Point; thence again following the shore line to and entering the Texas City channel.

This report is in anticipation of the work to be started this fall by the United States Government in deepening and straightening the Houston Ship Channel. The entire course will be deepened to a depth of 25 feet maximum. For this work \$2,500,000 has been appropriated, one-half by the Government, contingent upon Harris county, in which Houston is located, raising an equal amount. Bonds to this extent were voted January 10 last in Harris county, and are now being prepared for sale. Upon their sale and the delivery of the money into a depository designated by the Secretary of War the Government appropriation will become immediately available and work will follow. Upon its

completion vessels of world commerce will dock at Houston.

JEROME H. FARRAR.

Jarratt Needs Capital.

Bank of Jarratts,

Jarratt, Va., August 25.

Editor Manufacturers Record:

I have recently sent a circular letter to the citizens of our village, with a view to awakening them to the possibilities which I think are in our reach; provided, however, we make a move to advertise our advantages. We have two good trunk lines of railroad running through our village, viz., the Atlantic Coast Line and the Virginian, which puts us in touch with good markets. We have abundance of raw material in close proximity, such as pine, gum, oak, etc., which could be used for making keg staves, veneering, furniture and numerous other manufactured articles. But in one thing we are lacking, and that is, capital. If we could attract some good enterprise here there would be no trouble about getting a location, and it might be that some of our good citizens would contribute a few thousand dollars to the stock of a well recommended manufacturing establishment.

The writer has resolved to keep hammering at a move to develop the possibilities of Jarratt, and he intends to see that no stone is left unturned in that end.

J. M. BROWDER, Cashier.

One of the effective means of advertising Louisiana at the St. Louis Exposition was an illustrated handbook entitled "Louisiana's Invitation." Louisiana has made considerable progress since the exposition was held, but it is to make a far greater progress still, and consequently the facts about its wonderful opportunities cannot be iterated too frequently. To that end, "Louisiana's Invitation" has just been republished in revised form and with important additions made by the late Charles Schuler, Commissioner of Agriculture and Immigration of the State.

U. S. Steel in August.

In a statement issued August 30 President Farrell of the United States Steel Corporation said regarding the operations of the corporation:

"The unfilled orders as at August 1 showed 3,584,000 tons (exclusive of inter-company business of 850,000 tons, a gain over June 30 of 225,000 tons. Since August 1 new business has been freely offered, and notwithstanding shipments in August have been large, the bookings up to the 20th inst. (the latest date to which data has been compiled) show a fair increase.

"The steel-producing plants of the corporation are operating about 78 per cent. of their capacity, while a number of the finishing departments of the various companies are operating 85 per cent.

"The daily bookings of the corporation from January 1 to August 20 show an average increase of 7750 tons, as compared with the same period in 1910.

"Specifications for prompt shipments in August are larger than for any previous month this year, and the outlook is all that can be desired."

Copenhagen Marine Motor Exhibition

The International Motor Exhibition in connection with the Scandinavian Fishery Exhibition and the Fourth Scandinavian Fishery Congress, to be held in Copenhagen, Denmark, in July and August, 1912, will afford an opportunity for marine motor manufacturers to introduce their products to the European visitors. Any manufacturer of and dealer in marine motors, winches for motors and similar mechanical contrivance for fishing and the transportation of fish has the right to exhibit at the motor exhibition. Manufacturers desiring to exhibit can obtain all the necessary blanks for application, together with other information about the exhibition, by applying to the Danish Consul at New Orleans, La.

MAKING MOST OF THE LAND.

A Louisiana Lumber Company's Plan to Develop an Estate.

Mr. J. Allen Barnett, secretary-treasurer of the Baldwin Lumber Co., Ltd., of Baldwin, La., writing to the MANUFACTURERS RECORD of plans for the development of the Breaux estate, says:

"This fall we expect to plant enough sugar cane on this land to enable us to plant the plantation solidly in sugar cane the following year, which will give us a very large crop in 1913. Of course, we will in the meantime plant as much corn and hay on the plantation as we can. It is one of the best located places in this section of Louisiana. It is made up of about 1100 arpents of cultivable high, sandy land, which is rolling. Three hundred arpents of this still has wood upon same and the balance is cleared. Upon it is one of the most beautiful old plantation homes, surrounded by a magnificent grove of large live oaks. Being in the sawmill business, you will possibly want to know why we purchased this property. This gives us a permanent right of way from same to the Southern Pacific lines. It also makes connections with about 800 acres of land owned by us with this right of way. It will also furnish us a mill site for our sawmill, as we expect to move our Baldwin mill to Lafayette within the next six months. Upon these 9000 or more acres we have some very beautiful timber in cypress, ash, oak and gum. Upon the clearing of this land we will install a permanent railroad; when completed it will be about 12 miles long. This large body of timbered land, which will be the most valuable farming land when cleared, with our standard railroad through the center will certainly make this property worth while. Just as the land is cleared we will open up small farms of from 100 to 200 arpents, and upon each of these farms we will build modern homes. We expect to light these homes by electricity, which will be furnished from our power plant by wires following our railroad. We will in due time install a motor line for our patrons, and the electricity will enable the farmers to pump water and light their homes and barns and every other convenience around the home."

Heat Saving in Cement Manufacture.

The application of heat-saving processes in the Tidewater Cement Co.'s plant at Union Bridge, Md., recently opened, forms an important element in the economy of that plant.

It has been estimated that where shale and the dry process are used the net heat necessary to obtain the desired chemical reaction for making cement can be supplied by the combustion of about 16 pounds of average long flame bituminous coal per barrel of clinker formed.

This economical result is obtained by passing the heated clinker through a "cooler," by which the great amount of heat is conveyed from this clinker back by the heated air current to the kiln or it is used to dry the coal and cement rock. Where this system is used a great saving of coal is effected.

In addition to this "cooler" for the clinker, the Tidewater company uses Ruggles-Coles dryers for drying the cement rock and the coal used for heating the kilns. This dryer consists of concentric shells, rigidly joined together but capable of revolution. The material as it is fed through the front end into the space between the two shells is picked up mechanically and dropped upon the inner shell. The hot gases are drawn by a fan through the inner tube and then pass back over the material between the shells, the direction

of the movement of the material and gases being opposite. By this method the heat losses are reduced to a minimum. The pulverized coal for use in the kilns is dried by a separate dryer from that which handles the cement materials.

The cost of this drying, according to tests made with two Ruggles-Coles dryers at a cement plant, with coal at \$2.40 per ton and labor at \$1.75 per day of 10 hours, was, so we are informed, \$.0195 per barrel of cement, while the fuel efficiency was 87.8 per cent. in each case. The cost per ton of coal dried was \$.0436, and the total amount dried by each dryer in 10 hours was 81 tons.

West Virginia City Factories.

Between 1904 and 1909 the capital invested in factories in West Virginia increased from \$86,821,000 to \$150,923,000, or 74 per cent., and the value of their products increased from \$99,041,000 to \$161,960,000, or 64 per cent. Increases in some of the leading cities of the State were as follows:

Wheeling—Capital, from \$17,808,000 to \$19,297,000, or 8 per cent.; value of products, from \$21,797,000 to \$27,077,000, or 24 per cent.; average number of wage-earners, from 7127 to 7800, or 10 per cent.

Huntington—Capital, from \$2,762,000 to \$4,917,000, or 78 per cent.; products, from \$4,407,000 to \$6,511,000, or 48 per cent.; wage-earners, from 2229 to 3156, or 42 per cent.

Parkersburg—Capital, from \$3,310,000 to \$4,424,000, or 34 per cent.; products, from \$3,778,000 to \$5,498,000, or 46 per cent.; wage-earners, from 1444 to 1495, or 4 per cent.

Charleston—Capital, from \$2,228,000 to \$2,825,000, or 27 per cent.; value of products, from \$2,100,000 to \$3,235,000, or 54 per cent.; wage-earners, from 887 to 951, or 7 per cent.

In 1909 the capital invested at Martinsburg was \$2,100,000 and the value of factory products \$2,515,000, and the capital invested at Bluefield was \$948,000 and the value of products \$1,465,000.

Electric Clock That Runs Two Years.

A keyless electric clock that runs with accuracy for two years without needing any attention whatever is one of the remarkable manufactured products of Baltimore. After having been thoroughly tested by the supervising architect of the Treasury Department, Washington, it has been installed in a number of Government buildings, including postoffices and United States courthouses, in both of which absolute time accuracy is essential. This clock is manufactured by the Electro Clock Co., 116 Mercer street, in a fully equipped clock-making plant. The self-winding or operating apparatus is controlled by a pair of inexpensive galvanic batteries. It is especially adapted to use in public buildings, factories, offices, private residences and other places where accurate time is essential or desirable. Clocks for private use have been sent to Canada and Cuba, and inquiries have been received from many foreign countries, including China, Japan, South Africa and Brazil. It is also found to be valuable in scientific work, where the accurate measurement is an element, and in automatic recording instruments, such as barographs, recording thermometers, etc. The electro clocks are fitted in various styles of cases, including metallic cases made of ornamental pressed steel in desirable colors, standard office regulator forms, wall-clocks, plate-glass case clocks, clocks for small offices, mission clocks, mantel and "grandfather" clocks.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Burlington, N. C.—City sold \$35,000 of bonds to construct streets and sidewalks.

Elizabethton, Tenn.—Carter county voted \$60,000 bond issue to construct highway.

Jeannerette, La.—City will issue \$60,000 for sidewalks and other street improvements.

Logan, W. Va.—City voted \$15,000 bond issue for street improvements.

Mineola, Tex.—Wood county sold \$30,000 of bonds for road improvements.

Murphy, N. C.—Murphy township sold \$50,000 of bonds for road construction.

Bonds to Be Voted.

Columbia, Mo.—Road Commissioners called election for September 8 to vote on \$100,000 bond issue for road construction.

Cullman, Ala.—Cullman county contemplates issuing \$500,000 of bonds for road construction.

Fort Mill, S. C.—City plans to issue bonds for street paving.

Fulton, Mo.—Fulton county will call election to vote on \$100,000 bond issue for road construction.

Harlingen, Tex.—City will vote September 26 on \$10,000 bond issue for street improvements.

Winston-Salem, N. C.—City of Salem contemplates a \$10,000 bond election for street improvements.

Contracts Awarded.

Baltimore, Md.—City awarded contract at \$2544.55 to resurface cobblestones.

Brownsville, Tex.—City awarded contract to construct three-inch block paving and five-inch concrete foundation.

Collins, Miss.—City awarded contract at \$8000 to construct and maintain 10 miles of streets for three years.

Concord, N. C.—City contracted for 4500 square yards of cement paving and 1000 feet of curbing to cost about \$6000.

Fort Mill, S. C.—City awarded contract for 2000 square yards of cement paving.

Kansas City, Mo.—City awarded contract for wood block paving and at \$55,951.88 for grading.

Knoxville, Tenn.—Knox county awarded contract at about \$6000 to repair streets.

Nashville, Tenn.—City awarded contract for 5000 linear feet of granitoid curbing and sidewalks.

Point a la Hache, La.—Highway Department awarded contract for shell roads to cost about \$100,000.

Contracts to Be Awarded.

Abilene, Tex.—City invites bids until September 7 for 3611 square yards of asphalt macadam, 510 feet cement guttering and 1096 feet of oak headers.

Baltimore, Md.—City receives bids until September 6 for grading, curbing, guttering and asphalt macadam paving.

Bastrop, Tex.—City receives bids until September 7 for concrete curbing and gutters and gravel macadamizing.

Bennington, Okla.—City invites bids until September 5 to construct about 40,000 feet of cement sidewalks.

Brooksville, Fla.—City will improve streets, having \$21,000 available for paving and possibly \$6000 for sidewalks.

Coleman, Tex.—City opens bids about October 1 for crushed rock street paving and concrete gutters.

Cullman, Ala.—City contemplates con-

struction of several miles of cement sidewalks.

Decatur, Ala.—City will construct pavements and sidewalks.

Frankfort, Ky.—Simpson county appropriated \$9750 to construct 14 miles of road, 12 miles of which are piked.

Lewisburg, W. Va.—City opens bids September 8 for street improvements to cost about \$16,500.

Lewisville, Tex.—District No. 1, Denton county, will construct and improve about 65 miles of roads.

Louisville, Ky.—City opens bids September 6 for sidewalks to cost about \$8000, and on September 7 for street improvements to cost about \$29,500.

Memphis, Tenn.—City receives bids until September 5 for street improvements, including 45,500 square yards asphalt, brick or wood pavement, 34,540 square yards concrete foundation, 1467 square yards bituminous macadam pavement, 11,700 square yards gravel or concrete pavement, etc.

Neosho, Mo.—Newton county invites bids until September 8 to construct granitoid pavement, concrete gutter, etc.

Petersburg, Fla.—City receives bids until August 31 for grading, granite curbing and vitrified brick paving.

Portsmouth, Va.—Seventh Ward Board of Improvements is having specifications prepared for street improvements to cost about \$50,000.

Pulaski, Va.—City invites bids until September 5 for street grading, macadamizing, etc.

Rutledge, Tenn.—Grainger county receives bids until September 2 for macadamizing 10 miles of highway.

St. Louis, Mo.—City receives bids until September 8 for street improvements.

Trenton, Tenn.—W. S. Waller and others plan construction of road from Trenton to Clarksville.

Vicksburg, Miss.—City will invite bids for laying 1500 feet of sidewalks.

Winston-Salem, N. C.—City appropriated \$37,500 for street improvements.

Southern Railway's Road Train.

The special road improvement train being operated through the South by the Southern Railway Co. will make stops between October 2 and October 25 in Georgia at Gainesville, Toccoa, Hartwell, Elberton, Clarksville, Clayton, Commerce, Athens, McDonough, Griffin, Columbus, Woodbury, Tallapoosa, Douglasville, Fayetteville, Zebulon, Fort Valley, Roberta, Jackson, Macon, Cochran, Eastman, Brunswick, Jesop, Hazlehurst, McRae, Baxley, Elko, Vienna, Cordele, Ashburn, Sparks, Tifton, Valdosta and St. George. Two days will be spent at Jasper, Lake City, Palatka and Lake Butler, Fla.

At the next meeting of the commissioners of Fulton county, Georgia, a resolution will be introduced to create the office of county engineer, at a good salary, to give his whole time to the improvement and maintenance of highways, a task that has become of great importance.

Big Deal in Mississippi.

The J. J. White Lumber Co. of McComb City, Miss., has purchased for development about 270,000,000 feet of virgin long-leaf yellow-pine timber, located east of Columbia, Miss. Present plans of the company contemplate the extension of the Liberty White Railroad from Holmesville to Columbia, thence through the timber, but details have not been fully determined. The company may build a sawmill on the property and float square timbers down Pearl River to New Orleans and Gulfport for export. The sale was negotiated by J. Numa Jordy of New Orleans.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

KENTUCKY COAL ROADS.

Louisville & Nashville May Do More Double-Tracking—Other Plans Also Rumored.

[Special Cor. Manufacturers Record.]

Barbourville, Ky., August 28.

As a result of the great increase in coal tonnage in Southeastern Kentucky, brought about by the extension of numerous "feeding" lines, the Louisville & Nashville Railroad is contemplating the double-tracking of its Cumberland Valley division, which carries all the tonnage of the recent extensions. The Cumberland Valley division is 44 miles in length from Middlesboro, the meeting point of Kentucky, Tennessee and Virginia, to Corbin, Ky., the divisional point. It is claimed that more feeding lines radiate from this division than from any other railroad of similar length in the South. During the past two years some progress has been made toward an ultimate double-track system by the building of long sidings, which have been used for storage yards. It is reported that early next year the Louisville & Nashville will begin the immediate double-tracking of the entire division.

The Wasioto & Black Mountain Railroad, the most important feeding line of the Louisville & Nashville in Southeastern Kentucky's coal fields, is now carrying a large coal tonnage, and the new extension of this line up Looney's Creek to the 20,000 acres of the International Harvester Co. will be followed by widespread developments in that section. The L. & N. is now building several miles of siding near Wasioto to avoid a congestion of traffic and is establishing a connecting link between the Wasioto & Black Mountain extension and the Chenoa branch, which enters the Clear Fork coal fields of Bell county in the opposite direction.

The Straight Creek Railroad has been extended several miles, and a number of coal-mining plants have been established in the portion of the Bell county field opened by the new extension.

The Cumberland Railroad, which has no connection with the Louisville & Nashville system, but which is one of the most important "feeders" of the latter, will extend its line from the Knox county coal fields to Jellico, Tenn., a distance of 36 miles. This extension has long been contemplated, and some work has been done in the way of grading, but the idea was temporarily abandoned three years ago. It is reported that construction work will be renewed at an early date on the Jellico extension, where connection will be obtained with both the L. & N. and Southern Railway systems. W. S. HUDSON.

ATLANTA & CAROLINA.

First Section of Line to Augusta Nearly Ready for Tracklaying.

[Special Cor. Manufacturers Record.]

Atlanta, Ga., August 28

Within 30 days the subcontractors, under the general contractors, Adams & Sturm of Columbus, O., and Atlanta, Ga., will have completed the grading of 27 miles of the proposed line of the Atlanta & Carolina Railroad Co., from Atlanta to Conyers, Ga. Tracklaying will begin immediately afterwards, and this part of the road will be ready for equipment possibly by February 1 next. The tracklaying for the whole system will be done entirely by the general contractors.

The proposed line of the Atlanta & Carolina Railroad Co. will extend from

Atlanta to Augusta via a number of other important places in Northern Georgia, a distance of 208 miles. The offices are located in Candler Annex Building, Atlanta. While the motive power is not yet selected, it is generally conceded that it will be electrically operated, although steam may be used.

Adams & Sturm have let subcontracts for grading the first 27 miles to John Romans, Joliet, Ill.; A. M. Brumblow, Rockmart, Ga.; J. C. Gill, Adrian, Ga., and Thomason & Cason, Atlanta, Ga. For the trestle construction of the whole system J. M. Crane of Chabbeate, Ga., received the contract. All the culvert and concrete work was awarded to Leftridge, Tucker & Leftridge, Lithonia, Ga. There will be used between Atlanta and Augusta two steel trestles and ten wooden ones. The maximum grade for the whole distance is 1 per cent.

The route is from Atlanta southeast to Lithonia and Conyers; thence due east to Monroe, turning north to Athens via High Shoals. After leaving Athens the line takes a southeasterly course and goes direct to Augusta via Lexington and Washington.

The Atlanta & Carolina Railroad when completed will pass through the center of some of Georgia's best undeveloped territory, and will give it an outlet for its products. ROY G. BOOKER.

TRACTION AND LIGHT DEAL.

Negotiations Reported for Transfer of Roanoke and Lynchburg Properties.

Dispatches from Philadelphia report that negotiations are in progress between the Virginia Railway & Power Co. of Richmond and the American Railways Co. of Philadelphia for the acquisition of the Roanoke Light & Traction Co. and the Lynchburg Light & Traction Co. properties. The Virginia Railway & Power Co. on July 1 acquired the Norfolk & Portsmouth Traction Co., and the two properties are now operated under the name of the former. Frank Jay Gould of New York is chairman of the board and William Northrop of Richmond is president.

The American Railways Co., which controls various street railway properties in Virginia, Pennsylvania, New Jersey, Ohio and Illinois, was organized about 10 years ago. J. J. Sullivan is president and Henry J. Crowley general manager. Its offices are in the Witherspoon Building, Philadelphia.

The Roanoke Traction & Light Co. operates 20 miles of track with 30 motor cars, and the Lynchburg Traction & Light Co. has 11 miles of track and 30 motor cars. Each controls lighting and power plants.

New Equipment, Rails, Etc.

The Western Maryland is expected to soon ask for bids on 4000 or 5000 freight cars, 40 or 40 passenger cars and about 10 locomotives.

The Railway & Light Co. of Rome, Ga., is reported to have ordered two closed electric cars 21 feet long from the J. G. Brill Company, Philadelphia.

The Norfolk & Western Railway, which has just completed 500 all-steel hopper cars at its shops, Roanoke, Va., will, according to a report from there, now build 500 all-steel gondola cars.

The St. Louis & San Francisco Railroad, according to a market report, has ordered 20 locomotives from the American Locomotive Co., New York.

The Kansas City Southern Railroad is reported about to place contract for 29 locomotives.

The Queen & Crescent Route is reported getting prices on 175 steel hopper cars,

159 steel gondola cars and 22 steel coke cars.

The Pennsylvania Railroad, says a dispatch from Pittsburgh, has ordered 700 steel gondola cars from the Pressed Steel Car Co. of that city.

The St. Louis & San Francisco Railroad is reported to have ordered 250 flat cars from the American Car & Foundry Co., St. Louis.

The Electric Traction Co., Muskogee, Okla., says a market report, has ordered 10 closed cars, each 21 feet long, from the American Car Co., St. Louis.

The Baltimore & Ohio is reported getting figures on 10 baggage cars and 5 postal cars, each 70 feet long, and also 5 postal cars 60 feet long.

The Jacksonville Electric Co., Jacksonville, Fla., is reported to have ordered 10 Birney semi-steel cars from the St. Louis Car Co., St. Louis, Mo.

The Florida East Coast Railway is reported in the market for equipment thus: Eight coaches, two combination cars and four express cars, each 70 feet long, and two postal cars 60 feet long. All this equipment is to be of all-steel construction.

The St. Louis & Jennings Railway, says a market report, has ordered 22 double-truck cars from the St. Louis Car Co.

The Wichita Falls Route is reported to have ordered 10,000 tons of steel rails from the Illinois Steel Co., Chicago.

The Chesapeake & Ohio Railway is reported getting figures on 2000 tons of bridge steel.

The Lynchburg Traction & Light Co.'s order for six pay-as-you-enter cars was placed with the J. G. Brill Company. They are of the semi-convertible type.

The Louisiana & Arkansas Railroad is reported to have ordered 1600 tons of bridge steel from the Pennsylvania Steel Co., Steelton, Pa.

The Louisiana Southern Railroad is reported to have received 3000 tons of 65-pound rails from the Pennsylvania Steel Co., this being part of an order for 4100 tons.

The Chesapeake & Ohio Railway is reported to have ordered 4500 tons, the Illinois Central 9400 tons and the Texas & Pacific 5800 tons of rails from the United States Steel Corporation.

Prepay Freight on Electric Road.

G. K. Willis, property agent for the Piedmont & Northern Railway Co., which is building the interurban electric railway that is to connect Charlotte, N. C., with Greenville and Greenwood, S. C., is reported saying that prepay freight stations will be established along the route so that farmers can get goods shipped to them much after the manner that they receive letters through the rural free delivery system.

It is said, for instance, that several farmers agree to share part of the expense of building alongside of the railroad a small station in which freight (upon which the charges must be prepaid) is placed upon arrival and locked up. Each man interested has a key to the building, and when his goods arrive he goes and gets them, after due notification as to time when they may be expected. The electric cars are to stop at these small stations for passengers as well for freight.

Construction is reported progressing rapidly on the line, about two-thirds of the work being done between Greenwood and Belton, S. C.

Oliver's Road to Be Extended.

The Knoxville, Sevierville & Eastern Railroad, says a dispatch from Knoxville, Tenn., will be taken out of its receivership,

an agreement having been attained by the various parties interested for the settlement of their claims. This, it is stated, will result in the line being turned over to W. J. Oliver of Knoxville, who built it and who hopes to extend it beyond Sevierville eastward into North Carolina and probably to a connection with the Greenville & Knoxville Railroad, which is building westward from Greenville, S. C. W. H. Patterson and Asa G. Candler of Atlanta being interested.

En route to North Carolina Mr. Oliver's railroad will reach, it is said, rich natural resources now undeveloped, but which will bring about industrial operations of magnitude and importance. Others interested in the road besides Mr. Oliver are Jerome Templeton, the Knoxville Banking & Trust Co. and the Mechanics' Bank & Trust Co. of Knoxville. It is said that the line is earning the interest on its bonds.

Baltimore & Ohio Items.

The Baltimore & Ohio Railroad has awarded a contract to the Baltimore Bridge Co. for the erection of a freight warehouse that will be an important addition to the export terminals of the system at Baltimore. The building, which will be located at Henderson's Wharf, will have a steel superstructure 230 feet long and 34 feet 9 inches wide.

A dispatch from Grafton, W. Va., announces that the Baltimore & Ohio has completed and put in service its new passenger station there.

The following appointments are announced: C. S. Wight, general freight traffic manager; O. P. McCarty, passenger traffic manager; C. W. Bassett, assistant to the passenger traffic manager; George W. Squiggins, general passenger agent.

W. B. Calloway is appointed general passenger agent for the Baltimore & Ohio Southwestern Railroad and the Cincinnati, Hamilton & Dayton Railway.

Will Build Another Extension.

President George M. Brinson of the Brinson Railway, Springfield, Ga., confirms the recent report of the completion of the extension to Waynesboro, Ga., and says that through operations began between Savannah and that point on August 20. The company will push work onward from Waynesboro.

Railroad Notes.

B. Herman has been appointed chief engineer of maintenance of way for the Southern Railway, with headquarters at Washington.

The Missouri, Kansas & Texas Railway, according to a report from Austin, Tex., has nearly completed the improvement of its lines between that city, Dallas and Fort Worth by rebalasting and laying 85-pound steel rails, besides widening cuts and fills. It is expected that the work will be done early in September and that the company will next year make similar improvements on its other routes in Texas.

The Atchison, Topeka & Santa Fe Railway is reported to have recently made a tracklaying record on its new line from Lometa to Eden, Tex., putting down 12,000 feet of track in one day with a force of 90 men. Their best previous record is said to have been 10,800 feet in a day.

The Western Maryland Railway statement for the year ended June 30 shows: Gross earnings, 1911, \$7,200,931; 1910, \$7,081,855; expenses, 1911, \$4,679,227; 1910, \$4,318,521; net earnings, 1911, \$2,521,704; 1910, \$2,763,334; total net income, 1911, \$2,940,290; 1910, \$3,273,744.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

Exposition Cotton Mills Addition.

The Exposition Cotton Mills of Atlanta has awarded contract to the Griffin Construction Co., 1013 Candler Building, Atlanta, to erect its proposed mill shed at a cost of about \$20,000. This building will be of mill construction, two stories, 100x213 feet, with timber cornice and tar and gravel roof, after plans by F. D. Milstead of Atlanta. The Exposition Company was recently mentioned as wiring to the MANUFACTURERS RECORD stating its plan to install 10,000 additional spindles, with all necessary preparatory machinery and looms. It is now operating 56,000 ring spindles and 1512 looms on sheeting and shirting production.

Opportunity for Cotton Mill.

E. M. Hayes, Pacific Beach, Cal., writes to the MANUFACTURERS RECORD as follows: "There is a splendid opportunity for a cotton mill in San Diego, Cal., and I should like to correspond with parties interested in this matter. The Imperial Valley is raising acres and acres of the very finest kind of cotton (note United States reports), and the new San Diego & Arizona Railroad will be completed within a few months, which will make San Diego the natural market for this product. There is a grand opportunity here for someone, and I shall be pleased to furnish full particulars to anyone interested."

Fairmont Mill's New Machinery.

The Fairmont (S. C.) Manufacturing Co.'s additional 1500 spindles and 40 looms, mentioned last week, will cost about \$15,000 and have a daily capacity of 2000 yards of cloth. This new equipment was contracted for as follows: Carding machinery, from the Saco-Petee Company, Newton Upper Falls; spinning machinery, from the Pales & Jenks Machine Co. of Pawtucket; looms, from the Draper Company, Hopedale, and shafting and pulleys, from the Jones & Laughlin Company of Pittsburgh.

Enlargement of Graniteville Mill.

The Graniteville (S. C.) Manufacturing Co. will expend about \$125,000 for the improvements lately announced.

Its new machinery will include 10,000 ring spindles to replace 10,000 mule spindles, 5000 additional ring spindles, 20 cards, 8 roving frames, 2 slubbers, turbine steam condenser and generator, etc. It is stated the company intends to install automatic looms after January 1.

At present the Graniteville plant has 45,922 ring spindles, 10,752 mule spindles, 1698 narrow looms, etc., for manufacturing sheeting, shirting and drills.

Completing New Clothroom.

The Monaghan Mills, Greenville, S. C., expects to have its new clothroom completed within 30 days. This building is two stories high, 100x105 feet, and will cost about \$20,000. It is of standard mill construction, and the contract was awarded to the Gallivan Building Co. of Greenville, S. C. The Monaghan company is a \$1,050,000 corporation, operating 6032 ring spindles, 160 twister spindles, 400

broad looms, 1060 narrow looms, etc., by electric power, and employs 700 operatives.

A 15,000-Spindle Mill.

George W. Hamilton, president of the Crown Cotton Mills, Dalton, Ga., is planning the construction of a 15,000-spindle mill, as reported last week, and he advises the MANUFACTURERS RECORD that nothing definite has been decided. The Crown Cotton Mills, of which Mr. Hamilton is now president, is a \$600,000 company, operating 35,000 ring spindles, 380 broad looms, 402 narrow looms, etc., and employing 650 operatives.

Aldora Mills Addition.

The Aldora Mills, Barnesville, Ga., will erect a two-story mill shed, 100x160 feet, of brick mill construction, after plans by F. D. Milstead of Atlanta; contract awarded August 31.

This company was reported in May as to erect an additional building and install looms, enabling it to weave the cotton yarn produced by its 10,000 spindles. It is stated the enlargement will cost \$150,000.

MINING

To Operate in West Virginia.

The Marsh Creek Splint & Gas Coal Co. has organized with \$100,000 capital stock to take over 2740 acres of land under lease. This property is located on Marsh and Clear Forks of Big Coal River and is said to contain extensive deposits of hard splint coal. The company has awarded a contract to B. V. Boxley & Co. for three miles of railway connecting with the Cabin Creek extension of the Chesapeake & Ohio Railway. Mining equipment has been purchased, but the company is in the market for a steel tippie. The main offices are at 907-909 Alderson-Stephenson Building, Charleston, W. Va. Officers include: President, T. E. B. Siler of Charleston, also president of Seng Creek Coal Co.; vice-president, Mathew Slush of Mt. Clemens, Mich., railroad contractor; general manager, W. H. Pettus of Jarrolds Valley, W. Va.; director, John F. Koenig of Detroit, Mich., of P. Koenig & Co.; director, John P. Commisky of Detroit, president of the Ohio & Michigan Coal Co.; director, W. W. Hannan of Detroit, of the Hannan Real Estate Exchange.

To Develop West Virginia Lands.

The Sandy Creek Coal & Coke Co. will be organized to develop 2200 acres of coal land on a branch of the Western Maryland Railroad in West Virginia. Its organizers are O. C. Sarber of Greensburg, Pa.; O. S. Blair and Andy Carson of Star Junction, Pa.; H. D. Odert of Monessen, Pa., and A. P. Music of Ligonier, Pa.

Texas Quicksilver.

In the Terlingua district of Texas, in Brewster county, on the Mexican border, 3320 flasks of quicksilver were produced in 1910. They had a value of \$154,413. Since production began there in 1899 the total output has been 44,844 flasks of 75 pounds each.

According to a dispatch from Jacksonville, Fla., M. N. Stineud of Halifax, Nova Scotia, announces that on September 1 a new line of steamers will begin operating between Halifax, Savannah, Brunswick, Charleston and Jacksonville. Later the service may be extended to Miami and Key West, and perhaps Havana.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

Electrical and Railway Equipments.

N. H. Harentz, Smyrna, Turkey, writes to the MANUFACTURERS RECORD:

"We shall probably need following for enlarging a horse railway: Seventy-five metric tons rails (Vignole system), each rail to be nine meters long, 5 per cent. allowance and weigh 20 kilograms per meter, each rail to have two to three perforations at extremities for adjusting plates; 25 tons of cross-bars or sleepers, each bar 1.8 meters long and to weight four kilograms; eight railroad points or pointers; 840 fishplates; 1600 rivets and other assorted rivets and materials for mounting the ties, etc.

"We shall also need a large number of the usual kind of bolts, from the smallest to the largest size. Could you not get suitable and competent manufacturing concerns to send catalogues with drawings of the special pieces required in the construction of horse railways, together with probable prices and costs c. i. f. at Smyrna? I hope you can get these sent without delay, as the time allowed for us to appear before the municipality is limited.

"I have just finished making drawings and estimates for hydro-electrical installations in two towns of Anatolia, for distribution of light and power. Every step has been taken for obtaining authorization of the local powers and for getting proper concessions. Papers are now in the hands of the Ministers of the Interior and Public Works at Constantinople, in order to secure firman of the sultan himself. In order to aid in this work I would like to form a stock company, and to that end have already received considerable local support which might serve as a guarantee to interested foreign investors."

To Represent Manufacturers in Brazil

Benedict Vienna Simal, Apartment 43, 107 W. 100th street, New York, writes to the MANUFACTURERS RECORD as follows:

"I wish to get representation in Brazil of some electrical and mechanical appliance manufacturers. I want agencies of the following: Electrical motors, generators, transformers and engines for electric service; electrical supplies; locomotives for railways; boilers and all kinds of engines for all purposes; structural steel for every purpose, as bridges, buildings, etc.; metal windows and doors for all uses; roofing iron and steel and roofing prepared; Browning cranes, steel drags, bucket excavators; gasoline motor boats, tugs and shallow river steamers; cement roofing and cement rubber; machines to cut all kinds of stone in different sizes; machines to make clay and cement blocks to build.

"If you know something new please let me know, because I would like to take it with me if a proposition strikes me. I am a civil engineer and have an office at Rio de Janeiro."

Materials for Electrical Machinery.

Monti & Martini, via Oriani 7, Milan, Italy, writes to the MANUFACTURERS RECORD:

"We beg to communicate that we are interested in all materials for the fabrication of electrical machinery, as mica, gum,

ebonite, porcelain, fiber, etc. We would be very thankful to have the addresses of American manufacturers of these articles."

Wants Information on Milking Machines.

R. G. Piefer, Rascon, S. L. P., Mexico, writes as follows to the MANUFACTURERS RECORD:

"Will you please give me information on some reliable milking machine suitable for milking from 10 to 15 cows?"

Machine and Black Oils.

Morrison & Co., 17 State street, New York, write to the MANUFACTURERS RECORD:

"Please put us in communication with lubricating oil refiners who wish to sell for export. We are in the market for cheap machine and black oils."

Alcohol and Wood-Pulp Machinery.

D. W. Ezzy, Killarney South, Australia, writes to MANUFACTURERS RECORD:

"I would deem it a favor if you would put me in the way of houses selling wood-pulp machinery suitable for using sawdust for making paper; also any firms who make or sell machinery for distilling alcohol from sawdust."

A Question of Laws.

In reply to a letter of Mr. George R. Brown, secretary of the Board of Trade of Little Rock, Ark., urging him to build a piece of railroad between Mena and Hot Springs, President B. F. Bush of the Missouri Pacific-Iron Mountain Railroad wrote as follows:

"Under the present conditions governing railroads, with the increased uncontrollable expense to which they are subjected by reason of legislative enactments, labor unions, etc., and not being able to get their rates increased sufficiently to meet such extra expense, it is out of the question for railroads to attempt to negotiate for new money to make extensions or construct new lines. It is only by the most difficult maneuvering that they can raise sufficient funds to make necessary improvements on existing lines and get new equipment to enable them to take care of the current business.

"A more enlightened and a more favorable public sentiment must prevail toward railroads before they will be in position to extend present lines or construct new ones. This situation is rather unfortunate for States like Arkansas, Missouri and others that have marvelous resources yet undeveloped. If a better public sentiment prevailed toward railroads it would mean that millions of capital would be brought into the State and invested permanently, which, of course, would create an industry for all time that would redound to the benefit of the citizens of the State, and the most the investors could expect to take out of the State for this large investment would be 5 per cent. per annum, which it could well afford to pay in view of the benefits that would accrue to the people from the investment.

"We will have to hope for a more favorable opinion to prevail toward railroads before there can be any large extensions made to the present railroads or new construction of lines. No money from earnings can be devoted to these purposes, as at present the earnings of railroads are scarcely sufficient to pay interest on the debt, and only in a few cases do they realize anything for dividends."

It is expected that within 90 days the Galveston-Houston interurban railway cars will be running into Galveston over the great causeway.

MECHANICAL

Ventilating System of Pennsylvania Railroad Tunnels.

The ventilation by means of powerful blower fans in a number of tunnels of the Pennsylvania Railroad Co. has produced beneficial results not only to the passengers and employees, but to the railroad company in a distinct saving in operating expenses through the tunnels, in time saved, closer running of trains, etc.

This system, as it is being installed in

well ahead of the train and keeps the track clear enough to permit the engineer to operate the train at a fair speed. The movement of the air is so rapid that it gives the passengers and crew good air, even when the train is stopped for any length of time.

The plant where these fans are to be installed was designed by Charles S. Churchill, chief engineer of the Norfolk & Western Railway Co., Roanoke, Va. He has designed ventilating plants for several other tunnels of the Pennsylvania and the Norfolk & Western railways, notably the

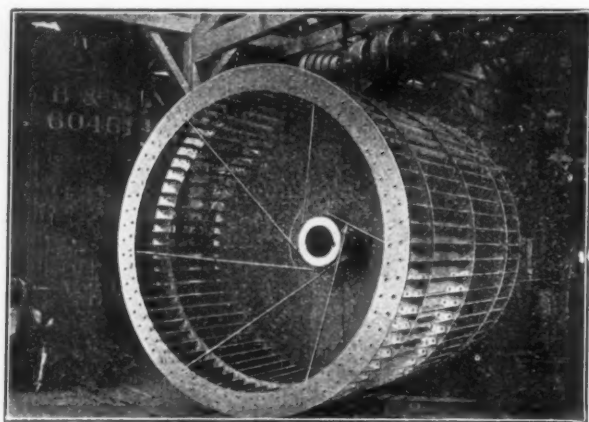


FIG. 1.—SIROCCO FAN FOR TUNNEL VENTILATION.

the Pennsylvania tunnel under Baltimore, is shown in the accompanying illustrations of the Sirocco fan and its casing, made by the American Blower Co. of Detroit and Troy, N. Y.

This tunnel is 4963 feet in length, and the crown at the portals is 19 feet above the tracks. A fanroom is located above one of the portals, and two large Sirocco fans are assembled there. Each fan measures 15½ feet high, 18 feet long and 14 feet wide, and is provided with electric motor and driving mechanism. The inlets to the casing of this fan are 11½ feet in diameter, and the size can be appreciated by noting the automobile that easily passes through it, as shown in the illustration. The fan wheel or impeller is 12½ feet in diameter, and is divided in its

Galetz, the Big Bend and the Elkhorn tunnel installations.

Previous to the installation at the Elkhorn tunnel at Coaldale, W. Va., on the Norfolk & Western Railway, it required from 17 to 55 minutes to clear the tunnel of smoke; the temperature of the tunnel was raised considerably above that outside, and frequent difficulties resulted from the smoky conditions in the tunnel. After the installation of the ventilating plant smoke would appear at the portal two minutes ahead of the engine, and in less than a minute after engine had passed out even the steam had vanished from the roof, where it usually clings persistently. East-bound trains which have to run up grade now pass through the tunnel at a fair speed, and one train can follow another

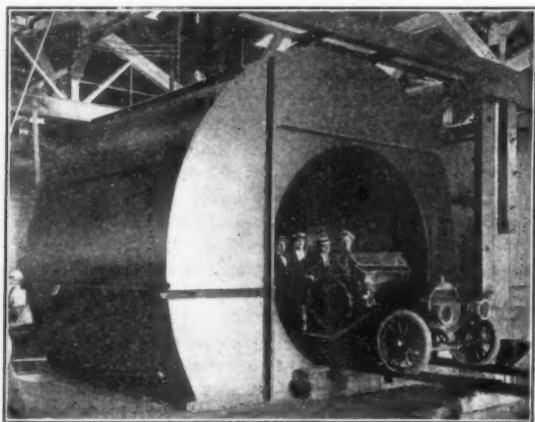


FIG. 2.—CASING OF LARGE SIROCCO FAN.

length by a diaphragm, which permits of air being used from each end, making practically two fans.

The speed and capacity of these fans has been designed to produce a flow of air through the tunnel of about 12 miles per hour, so that the smoke will only require 4¾ minutes to pass from one end to the other. But when a train is passing through in the same direction as the flow of air, the velocity of the air current is greatly increased on account of the reduction of cross-section and volume of air space with the train passing through. This results in the smoke being driven

as rapidly as it is safe to place them in running on the open tracks.

The installation made it possible to increase the load of eastbound trains about 100 tons, saving four trains per day on a run of 11 miles, making an estimated saving of \$17,000 to \$20,000 per year for this one tunnel. This is mentioned as showing that the ventilation of a railway tunnel makes a profitable investment, besides adding to the comfort of its passengers and crews, and reducing the liability of accidents due to smoke in tunnels.

The advantages claimed for Sirocco fans in this connection are the compara-

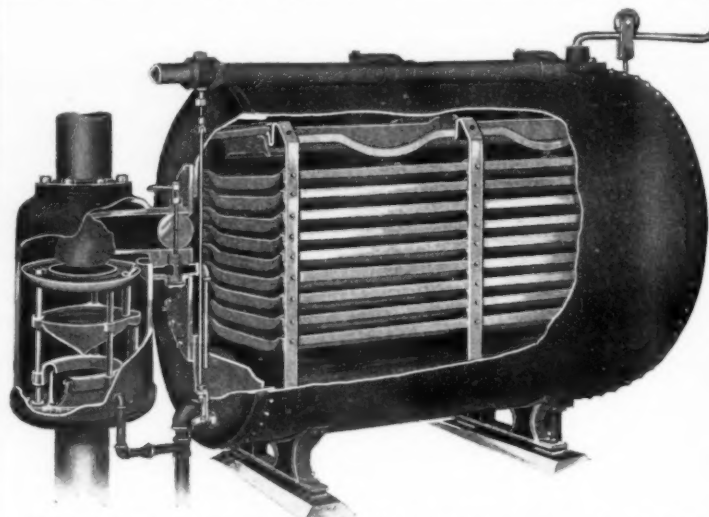
tively small size of the fans for a given duty, its high efficiency and quiet operation.

Hoppes Feed-Water Heater, with Improved Induction Chamber.

A rather complex and expensive operation is encountered, owing to the large number of valves and fittings required, when piping up a feed-water heater on the induction plan where part only of the exhaust steam is required to heat the boiler feed-water and the remainder is used in heating or drying system or

the induction pipe or outlet pipe, these openings are surrounded by troughs partly filled with water, which intercept the oil and it is carried off by drain pipes as shown. The inlet port is also guarded by an inverted trough to prevent the spraying and atomizing of any oil that may creep up the walls of the inlet pipe. A small vent with valve operating on the same stem as the cut-out valve carries off air and non-condensing gases from the heater when in operation and prevents it from becoming air-bound.

These induction chambers are made for



HOPPES FEED-WATER HEATER WITH IMPROVED INDUCTION CHAMBER.

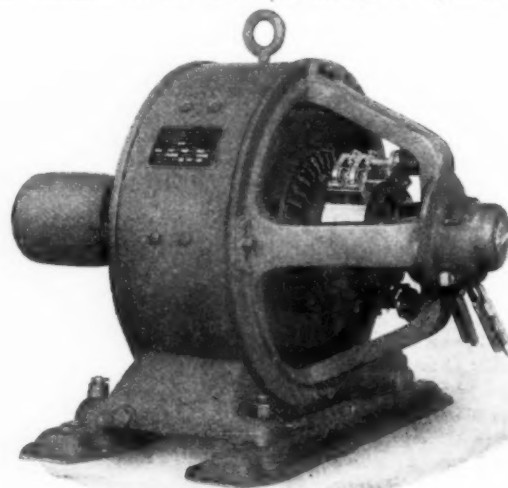
passed to the atmosphere. The accompanying illustration shows how this difficulty is overcome and the expense reduced to a minimum by the use of the Hoppes improved induction chamber, manufactured by the Hoppes Manufacturing Co., 97 Larch street, Springfield, O., for use in connecting up Hoppes feed-water heaters.

This apparatus serves as an oil eliminator not only for the exhaust steam to heater, but for that going to heating system or atmosphere as well. It does away with the necessity and expense of an independent oil eliminator for the heating

any size of exhaust pipe, and by means of a system of interchangeable flanges can be used in connecting up any size or type of Hoppes heater. A large number are now in operation in some of the best power plants in the country.

Westinghouse Type "SK" Direct-Current Motor.

A new direct-current motor designated as type "SK" has been developed by the Westinghouse Electric & Manufacturing Co., East Pittsburgh. It is made in sizes for 115, 230 and 550 volts, and of 1½ to 50 horse-power capacities.



WESTINGHOUSE TYPE "SK" D. C. MOTOR.

system. It also performs the functions of a by-pass and cut-out valve when it is desirable to cut the heater off for cleaning or inspection, as this is done by a single turn of the valve lever.

The exhaust steam enters the induction chamber at the bottom port, and the oil and moisture is removed from the steam current by its striking the smooth deflecting cone and expanding in the steam chamber. This oil and moisture flows down the walls of the chamber to the reservoir at the bottom, whence it is drained to the overflow pipe of the heater through the drain connection shown. To preclude any possibility of oil creeping into

One of the features of this new motor is the excellent commutation claimed for it, which is produced partly by the use of commutating poles and partly by the careful design of the commutator, the brushes and brush holders. Service tests have shown practically sparkless commutation. Other characteristics are the large dust-proof bearings and the efficiency of the oiling system. Large oil rings keep the bearing surface well lubricated whenever the motor is in operation, and the oil cannot leak or be thrown out of the well.

The accompanying illustration shows the simple construction of this motor. The newly-designed frame is a ring of

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open-hearth steel made by rolling the heated slab into shape and welding the ends together. The high magnetic permeability, uniform structure and great strength of this construction gives it a distinct value.

Ample ventilation is obtained by so winding the armature that wide spaces are left between the ends of the rolls, and by providing ventilating ducts in the core. The shaft can be pushed out without disturbing the armature windings and commutator connections.

The speeds of this type correspond closely to full-load speeds of induction motors, thus simplifying their application.

Allis-Chalmers Machinery in Sawmill Plants.

The Moline Timber Co., Malvern, Ark., has recently secured extensive timber holdings in central and southern Arkansas for the purpose of providing suitable lumber for the various factories controlled by Deere & Co., Moline, Ill., as well as to sell the product in the open market. The Deere interests are heavy consumers of hardwoods in their agricultural machinery, having purchased for many years enough hickory and oak to keep a large sawmill running.

The site selected for the Moline Timber Co.'s mill is located on the Chicago, Rock Island & Pacific Railroad, about one mile from Malvern. All the machinery for the sawmill, as well as the transmission machinery for the dimension mill and the electric-lighting plant, were furnished by the Allis-Chalmers Company, Milwaukee. A Brownhoist locomotive crane manufactured by the Brown Hoisting Machinery Co., Cleveland, will handle the logs from cars as they are brought in by rail. The logs will then be hauled into the mill by a 1x8-inch round-link log chain. A three-arm kicker and a three-arm loader will deliver the logs to the carriage, which will have three blocks built of steel and opening 60 inches. The carriage track will be made of 60-pound railroad rails planned to suit the carriage wheels. The steam "nigger" will be of the oscillating type, having cylinders 8 and 10 inches in diameter and 6 feet long. A direct-acting steam feed will operate the carriage and pneumatic carriage buffers will be used. The band mill will have wheels eight feet in diameter and use 12-inch saws, and will be of the Allis design. A divided roll edger and a gang slasher having three saws will be installed. The gang trimmer will have six saws, and will be arranged to trim lumber 8 to 16 feet in length.

The dimension mill is larger than the sawmill, and a considerable amount of machinery of the most modern kind is being installed in it. The machines will be placed in two rows lengthwise of the mill, and will be driven by two main lines of shafting beneath.

The power-house is conveniently located between the sawmill and dimension mill. The boiler and engine rooms are of concrete, with a concrete firewall between them. The boiler plant is furnished by the Walsh & Weidner Manufacturing Co. of Chattanooga. The sawmill will be driven by a pair of 15x20-inch Atlas twin throttling engines, belted to the line shaft. At the opposite end of the engine-room will be placed an 18x24-inch single Atlas throttling engine, which will be belted to the dimension mill. The third engine, with 9x12-inch cylinder, will be belted to an Allis-Chalmers 15-kilowatt 120-volt direct-current generator, which will furnish light for the mills, yards and dwelling-houses. A residence is being erected by the company for General Manager Thorne, who will make his headquarters at the mill. A cottage is also being erected

for the use of directors and stockholders upon their visits to the plant. The capacity of the mill is estimated at 40,000

handled 3528 yards of concrete, hauled at an average distance of 2800 feet by two 12-ton Porter locomotives, leaving the



FIG. 1.—BROWNHOIST LOCOMOTIVE CRANE ON 11-FOOT WATER MAIN.

feet per day, and the dimension mill at 30,000 feet. This mill will insure a supply of high-grade hardwood timber at a minimum of expense, and all cut to dimension and seasoned before shipping. A large stock will be carried in the yard seasoned and ready for shipment as required.

"Brownhoist" Locomotive Cranes on New York Aqueduct Work.

The use of the locomotive cranes manufactured by the Brown Hoisting Machinery Co., Cleveland, O., and 50 Church street, New York, on the construction work of the New York Catskill Aqueduct is shown in the two accompanying illustrations.

The crane shown in Fig. 1 is being used on a section of the Catskill tube known as the Kensico By-pass. This by-pass will eventually be submerged by 45 feet of water, forming what will in the completed system be Kensico Lake, a supply reservoir with capacity of 40,000,000,000 gallons. This is a 10-ton 4-wheel 2-drum standard-gauge Brownhoist locomotive crane equipped with a 40-foot 9½-inch boom, with radius indicating device. The crane has been found well adapted to the conditions under which it has been operated, and in handling the concrete buckets it has not been necessary to do any adjusting.

The work in this section, as described by W. C. Jones, civil engineer for the Rhinehart & Dennis Company, Colorado Building, Washington, contractors for the work, consists of excavating for and constructing a tube 11 feet inside diameter. The tube is made of reinforced concrete, with 1½-inch twisted reinforcing steel rods spaced 18 inches apart and held in place by one-half-inch longitudinal rods. The reinforcement runs 253 pounds per linear foot, and is so closely placed that keeping the concrete properly worked is somewhat difficult.

From July 10 to August 10 this crane

crane idle about half the time. The concrete is hauled on flat cars in Lockwood automatic steel buckets. Besides handling this concrete, the Ransom steel forms in

The best day's run was 173 buckets, making a section cast 60 feet long. It is stated that the Brownhoist locomotive crane could have easily handled 300 buckets if the concrete had been provided that fast. The crane is handled with 110 pounds of steam, uses 600 gallons of water and one-third ton of coal for an eight-hour shift. The expense per eight-hour shift as summed up is for engineer, \$3.50; for helper, \$1.75; coal, \$1.25; water, 50 cents; maintenance, 15 cents; total, \$7.15.

An important item mentioned is that in two years of daily service this machine has needed no repairs; also that it has been off and on the track again in 10 minutes, keeps steam well and is now practically as good as new.

Fig. 2 shows a Brownhoist locomotive crane at work on another section of the Catskill Aqueduct, where it is doing heavy hoisting, handling construction material, excavating, etc., as required.

Building at Louisville.

Mr. Jo. Hieatt of Louisville, Ky., formerly president of the Real Estate Exchange of that city, has issued a statement showing that \$6,360,000 worth of building is in progress or assured in that city, and that there is a prospect of other construction work in the near future approaching \$1,500,000 in value. The prospective buildings are an \$800,000 apartment building 10 stories high, a \$100,000 suburban apartment hotel and a \$300,000 Chamber of Commerce building. Buildings under way or to be started immediately include a \$1,000,000 hospital, a \$750,000 hotel, a \$750,000 office building, a \$400,000 Young Men's Christian Association building, a \$300,000 church, a \$100,000 newspaper plant, a \$500,000 electric company building and several \$100,000 apartment-houses and office buildings.

A report from Washington says that the Navy Department has awarded to the Maryland Steel Co., Sparrows Point,



FIG. 2.—BROWNHOIST LOCOMOTIVE CRANE ON CATSKILL AQUEDUCT WORK.

a section of 42.5 feet are moved a distance of 130 feet each day and placed in position for the next day's cast.

Md., the contract for building the two naval colliers for which bids were recently opened.

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "It is reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription to the Daily Bulletin is included for the contract period.

BRIDGES, CULVERTS, VIADUCTS

Ark., Pontoon.—Yell County Commissioners, Dardanelle, Ark., and Conway County Commissioners, Morrilton, Ark., contemplate construction of steel drawbridge over Petit Jean River.

Ark., Success.—Clay County Commissioners awarded contract at \$3550 to Vincennes (Indiana) Bridge Co. to construct steel bridge over Little Black River.

Fla., Cortez.—City voted \$15,000 bond issue to construct bridge across Sarasota Bay from Cortez to Anna Maria Key. Address The Mayor.

Ga., Waycross.—City will construct galvanized-iron culvert on Folks St.; let contract September 4. Address The Mayor.

Ky., Hazard.—Hazard Bridge Co. chartered with \$15,000 capital stock by Jesse Morgan, T. S. Ward and J. B. Hoge.

Ky., Versailles.—Franklin County Commissioners awarded contract at \$5000 to Gormley Bros., Versailles, to construct bridge over Elkhorn Creek at Peaks Mill.

Md., Cumberland.—Baltimore & Ohio Railroad Co., F. L. Stuart, chief engineer, Baltimore and Charles Sts., Baltimore, Md., will construct subway seven feet wide by nine feet high and lighted with electricity; cost \$26,000. (See "Railway Stations.")

Miss., Vicksburg.—City and county will construct bridge over Glass Bayou; reinforced concrete construction; cost \$13,000. Address The Mayor.

Miss., Vicksburg.—City invites bids until September 23 for repairing brick arch and constructing reinforced-concrete extensions to brick arch over Glass Bayou on Washington St.; plans and specifications in offices of Chancery Clerk and City Engineer. (See "Machinery Wanted.")

Mo., Kansas City.—County Court awarded contract at \$2300 to Mulholland & Co., Kansas City, to construct concrete bridge, and at \$2400 to Forrester Bros. Stone Co., Kansas City, to construct stone bridge.

Mo., Kansas City.—Board of Public Works engaged Waddell & Harrington, New Nelson Bldg., Kansas City, to prepare plans for 12th St. traffic-way; Louis R. Ash, City Engineer. (Recently noted under "Roads and Streets.")

Mo., Kansas City.—Board of Public Works awarded contract at \$55,551.88 for grading McGee St. traffic way to McTernan & Halpin Construction Co., Kansas City.

Mo., Kansas City.—County Court has invited bids to construct 10 steel and wooden bridges, estimated to cost \$38,000.

N. C., Hendersonville.—Henderson County Commissioners will construct two steel bridges across French Broad River; bids received October 2. S. M. King may be addressed. (See "Machinery Wanted.")

S. C., Charleston.—Charles County Supervisor, J. M. La Roche, chairman, receives bids until September 6 to construct causeway, equip ferry, construct landing slips, construct bridge, etc.; plans and specifications on view. (See "Machinery Wanted.")

Tex., Brazoria.—Brazoria county will erect two bridges across Brazos River at Columbia and at Brazoria; bids received until noon September 11 at office of J. W. Munson, County Judge, Angleton, Tex.; duplicate plans and specifications obtainable on application to F. S. Rice, engineer, Sweeney, Tex. (See "Machinery Wanted.")

Tex., Columbia.—Brazoria county will erect bridge over Brazos River; bids received until noon September 11 at office of J. W. Munson, County Judge, Angleton, Tex.; F. S. Rice, engineer, Sweeney, Tex. (See Tex., Brazoria, and "Machinery Wanted.")

Tex., Liverpool.—Brazoria county, J. W. Munson, judge, will receive proposals until September 11 to construct wooden bridge with draw; for plans, etc., apply to M. L. Drake, County Commissioner, Arvin, Tex. (See "Machinery Wanted.")

Va., Appomattox.—P. St. J. Wilson, State Highway Commissioner, Richmond, Va., receives bids until September 6 to construct two steel bridges across Rack Island and Rent creeks; plans and specifications on file at office of County Clerk. (See "Machinery Wanted.")

Va., Hillsville.—P. St. J. Wilson, State Highway Commissioner, Richmond, Va., receives bids until September 6 to construct 144-foot steel span across Little Reed Island; plans and specifications at office of County Clerk. (See "Machinery Wanted.")

W. Va., Summersville.—Nicholas County will construct bridge across Cherry River at Fenwick; 135-foot span, 14 feet wide; substructure, stone or concrete; steel superstructure; bids opened September 11; P. N. Wiseman, clerk. (See "Machinery Wanted.")

CANNING AND PACKING PLANTS

N. C., Greensboro.—Durham Canning Co. changed name and increased capital stock from \$25,000 to \$50,000.

CLAYWORKING PLANTS

Miss., Pascagoula.—Bricks—De Lamorton Manufacturing Co. will, it is reported, install machinery for daily capacity of 50,000 bricks.

W. Va., Huntington.—Brick—Huntington Clay Products Co., care T. L. Millard, 419 Robson Prichard Bldg., awarded contract to Brown Engineering & Equipment Co. to erect \$63,000 fireproof building; subcontracts to be let; machinery bids closed; will manufacture paving and building brick; daily capacity, 100,000; officers not elected. (Recently noted.)

COAL MINES AND COKE OVENS

Ky., Hellier.—Thomas J. Mitchell, Uniontown, Pa.; Charles E. Hellier, president of Big Sandy Co., Boston, Mass., and associates are organizing Mitchell Coke Co. to construct coke ovens of Mitchell type.

Ky., Providence.—Harris Coal Co. chartered with \$15,000 capital stock by F. B. Harris, R. C. Harris and Thomas E. Finley.

Okl., Oklahoma City.—Pioneer Coal & Timber Co. chartered with \$10,000 capital stock by H. G. Larsh, A. E. Larsh and J. A. Harbert.

W. Va., Bluefield.—Rex Coal & Coke Co. increased capital stock from \$75,000 to \$100,000.

W. Va., Charleston.—Sandy Creek Coal & Coke Co. will be chartered by O. C. Sarber of Greensburg, Pa.; O. S. Blair and Andy Carson of Star Junction, Pa.; H. D. Ollert of Monessen, Pa., and A. P. Music of Ligonier, Pa.; owns 2200 acres coal land on Western Maryland Railroad.

W. Va., Marsh Fork (not a postoffice).—Marsh Creek Splint & Gas Coal Co. organized; main office, Alderson-Stephenson Bldg., Suite 907-S-9, Charleston, W. Va.; capital stock \$100,000; president, T. E. B. Siler of Charleston; vice-president, Mathew Slush, Mt. Clemens, Mich.; leased 2740 acres land from Roland Land Co.; will later divide property and organize company for second operation; has let contract for three-mile spur railway to be completed about December 1; purchased machinery; will install steel tipples (See "Machinery Wanted.")

CONCRETE AND CEMENT PLANTS

Ala., Birmingham.—Steel Molds.—Steel Molds Concreting Co., 815 Brown-Marx Bldg., operates under patents of Morrill Molds Corporation, Washington, D. C.; will lease molds to concrete workers; H. E. Shropshire, president; R. W. Knight, vice-president; W. A. Shropshire, secretary-treasurer; Elliott Knight, manager. (Recently noted incorporated with \$2000 capital stock.)

Fla., Brooksville.—Cement Curbs and Blocks.—J. J. Bell will establish plant to manufacture cement blocks and curbs for street improvements; construction begun.

COTTON COMPRESSES AND GINS

Ala., Atmore.—Peavy Mill & Gin Co. chartered with \$40,000 capital stock by J. F. Peavy, W. F. Lamont, C. C. Huxford, Thos. G. Byrne and others.

Ala., Ohatchie.—Ohatchie Gin & Manufacturing Co. chartered with \$5000 capital stock by L. C. Martin, W. W. Gullledge, S. E. Logan and H. L. Tarvin.

Ark., Brinkley.—Farmers' Gin Co. chartered with \$9000 capital stock by John Gazzola, James Gunn, Sr., Andrew Flora, W. H. McLean and others.

Fla., Dade City.—C. H. Pillsbury, manager Florida Cotton Oil Co., Jacksonville, Fla., states erection of cotton gin at Dade City is contemplated, but his company is not interested. (Recently noted under "Cottonseed Oil Mills.")

Ga., Culloden.—Culloden Ginning & Fertilizer Co. elected U. S. Fuller, president; W. M. Hutchinson, secretary-treasurer; Mr. Fuller, manager; has plans by Jos. Davidson, Atlanta, Ga., for ordinary construction building. (Recently noted incorporated with \$7500 capital stock.)

Ga., Mansfield.—Merchants & Farmers' Gin Co. organized with \$10,000 capital stock by C. C. Lunsford, W. B. Hurst, Fielder Ozburn and others.

Ga., Pyne (not a postoffice).—S. A. Smith & Co., Lagrange, Ga., are proceeding with installation of proposed cotton-gin plant; cost of machinery \$2500. (See "Machinery Wanted.")

Mississippi.—Dixon Manufacturing Co. chartered with \$300,000 capital stock by James G. Dickson, Robert A. Silliman and others of Little Rock, and J. P. Abernathy of Argenta, Ark.

Okl., Norman.—Cleveland County Gin Co. chartered with \$10,000 capital stock by H. E. Walker, M. Morgan and William Morgan, Jr.

Tex., Clarendon.—Brice Gin Co. chartered with \$6000 capital stock by R. S. Kimberlin, M. T. Bell and John Grady.

Tex., Hubbard.—Farmers' Oil & Gin Co., T. J. Sanders, president, has begun construction of plant previously reported; cost \$25,000; machinery ordered.

Tex., Primm.—Sladczyk & Primm awarded contract to M. M. Turney of Smithville, Tex., to construct cotton gin.

Tex., San Benito.—Dandrum Ginning Co. chartered with \$6000 capital stock by K. L. Dandrum, A. E. Chapman and Samuel Spears.

COTTONSEED-OIL MILLS

Ala., Benson.—Dixie Industrial Co. will erect oil mill; cost about \$3500; construction begun; machinery contract placed.

Ala., Dothan.—Moore Oil Co. organized with \$15,000 capital stock to build plant; president, D. D. Carmichael; vice-president and general manager, E. S. Moore; secretary-treasurer, P. L. Clendenin.

Ala., Headland.—Headland Oil & Feed Co. will erect two-story 36x70-foot oil plant, 36x40-foot engine and boiler room and 50x100-foot one-story seedhouse; cost about \$30,000; machinery contract let.

Ark., Jonesboro.—Roberts Cotton Oil Co., Memphis, Tenn., will expend \$75,000 on plant previously noted; machinery contract placed.

Fla., Dade City.—Florida Cotton Oil Co., Jacksonville, Fla., will not erect plant recently noted. (See "Cotton Compresses and Gins.")

Ga., Offerman.—Dixon & Sweat will erect oil mill; construction begun; machinery contracted for.

Miss., Scott.—Delta Planting Co. will erect proposed oil mill; two-story 40x80-foot main mill; 60x150-foot one-story seedhouse; cost about \$60,000; placed contract for machinery; construction begun.

Mo., Leads (Kansas City suburb).—W. M. Black will convert three-story building into oil-mill plant; investment about \$40,000; machinery ordered.

N. C., Lilesville.—Mrs. John B. Ingram will erect oil mill; cost about \$4000; construction commenced; machinery ordered.

N. C., Newton.—Newton Oil & Fertilizer Co. has plans for two-story oil mill; 32x64 feet; cost about \$30,000. (Machinery previously noted purchased.)

Okl., Holdenville.—Farmers & Merchants' Cotton Oil Co. will erect plant; cost \$30,000; construction begun; machinery ordered.

Okl., Mangum.—Farmers' Co-operative Cotton Oil Association will erect oil mill; cost about \$5000; construction begun; machinery contract let.

S. C., Gray Court.—Gray Court Oil & Fertilizer Co. incorporated with \$2500 capital stock (not \$25,000 capital stock, as recently noted), will operate cottonseed oil and meal mill and fertilizer plant; G. W. Owings, manager.

Tex., Bellville.—Bellville Cotton Oil Co. will erect plant; cost about \$25,000; construction begun; machinery ordered. (Recently noted incorporated with \$30,000 capital stock by A. Brigger, C. F. Hellmuth and A. A. Sander.)

Tex., Brookston.—Col. J. Sheb Williams will erect oil mill; cost about \$7000; construction begun; machinery ordered.

DRAINAGE AND IRRIGATION

Ky., Paducah.—W. L. Bower, ditch commissioner, awarded contract to J. A. and J. R. Gregory, Gilbertville, Mo., to construct ditch for draining Blizard pond.

N. C., Statesville.—Third Creek Drainage Commissioners, L. O. White, chairman, have secured equipment and awarded contracts for machinery and supplies to proceed with proposed Iredell county drainage.

Okl., Garrett.—H. E. Thompson of Garrett, A. C. Monson of Denver, Col., and others have filed with State Board of Agriculture, Ben Hennessey, secretary and engineer, Oklahoma City, Okla., plans for taking 1220 cubic feet water daily from Cimarron River to irrigate 120,000 acres land in Cimarron county; estimates cost of canal, reservoir, etc., \$708,710.

Tex., Bay City.—Matagorda County Commissioners' Court ordered preliminary surveys for drainage district to cover 50,000 acres land. A. E. Luckie will supervise. (Bond issue recently voted.)

Tex., Barreda.—Samuel Spears, care of E. F. Rowson, Houston, Tex., will probably construct canal to irrigate 22,000 acres of land. (See "Land Developments.")

Tex., Brownsville.—Indiana Co-operative Canal Co. awarded contract to reconstruct seven miles of canals to J. C. Debrula of Brownsville.

ELECTRIC PLANTS

Ala., Birmingham.—Birmingham Railway, Light & Power Co. awarded contract to Henry R. Worthington of New York to erect three cooling towers to be operated in conjunction

with condensing apparatus; machinery contract placed. (Recently noted.)

Ala., Dothan.—City voted \$70,000 bond issue to construct electric-light plant; R. W. Lisenby, City Clerk. (Previously reported as having received bids for buildings.)

Ala., Eufaula.—City voted \$40,000 bond issue to purchase electric-light plant and to improve gas plant. Address The Mayor.

Fla., Jacksonville.—City votes September 5 on proposed bond issue; \$35,000 for electric-light plant and water-works, \$195,000 for sewers and \$20,000 for park improvements, 1911 issue; \$100,000 for street improvements, 1910, 1900 for water-works and electric plant and \$5,000 for parks, 1912 issue. Address The Mayor. (Lately mentioned.)

Fla., New Smyrna.—City contemplates arranging bond issue for electric lighting, water supply and sewers. A. D. P. Smith is chairman of committee promoting movement.

Fla., South Jacksonville.—Board of Bond Trustees invites bids until September 4 for installing electric-lighting machinery and furnishing and installing electric transmission system; specifications obtainable at office of consulting engineer, William W. Lyon, 25 Duval Bldg., Jacksonville, Fla. (See "Machinery Wanted.")

Ky., Hazard.—Hazard Light & Water Co. chartered with \$25,000 capital stock by Jesse Morgan, J. R. Hoge and T. S. Ward.

Mo., Bladensburg.—Washington, Westminster & Gettysburg Railway Co., W. H. Saunders, president, 1407 F St., Washington, D. C., purchased mill building and will remodel for electric powerhouse.

Mo., Laclede.—Laclede Electric Light Co. chartered with \$5000 capital stock by Z. T. Standley, E. B. Allen, R. L. Wheeler and others.

Mo., Monett.—City voted \$10,000 bond issue to improve electric-light plant and water-works; city recently mentioned as to install considerable machinery, which was detailed; engineers in charge, Rollins & Westover, Beals Bldg., Kansas City, Mo.

Mo., Princeton.—City voted \$7000 bond issue for electric plant and water-works extension. Address The Mayor. (Lately mentioned.)

N. C., Rutherfordton.—City will construct electric-light plant recently noted; 13 miles from town; 150 horse-power capacity; transmitted at 11,000 volts, three phase, and distributed in town at 2200 volts; used to operate water-works, street and industrial lighting; machinery purchased; B. Parks Rucker, Charlotte, N. C., engineer in charge. (See "Machinery Wanted.")

N. C., Shelby.—City plans buying electric plant of Shelby Light & Power Co. or constructing plant; company offers plant at \$20,000; city will probably have plans, specifications and estimates prepared for construction of plant. Address The Mayor.

S. C., Springfield.—Springfield Electric Light & Power Co. incorporated with \$30,000 capital stock; John McB. Deane, president; Michael Chittin, vice-president; J. B. Smith, secretary-treasurer; will construct plant two and one-half miles out of Dean Swamp Creek; 80 horse-power; F. E. Brodie, Leesville, S. C., engineer in charge.

Tenn., South Pittsburg.—South Pittsburg Light Co. chartered with \$10,000 capital stock by W. C. Houston, A. L. Kelly, Charles Houston, J. A. Price and J. B. Phillips.

Tenn., Trenton.—City will vote September 5 on \$12,000 bond issue to install electric-light plant. Address The Mayor.

Tenn., Trenton.—City holds election September 28 to vote on \$12,000 bonds for electric-light plant. Address The Mayor.

Tex., Bryan.—City voted \$20,000 bond issue to complete light, water and sewerage plant. Address The Mayor.

Tex., Dallas.—Southern Minneapolis Farm Power Co., Charles M. Lowe, president (recently noted incorporated), organized to deal in farm machinery. (See "Miscellaneous Enterprises.")

Tex., Harlingen.—City will vote September 28 on \$22,000 bond issue for electric-light plant and water-works and \$10,000 for street improvements. Address The Mayor.

Tex., Hearne.—City receives bids until 3 P. M. September 4 for complete electric-light plant equipment; plans by O'Neil Engineering Co., Praetorian Bldg., Dallas, Tex. (See "Machinery Wanted.")

Tex., Houston.—Houston Lighting & Power Co., George H. Davis, president, awarded contract to John Stadler, Houston, Tex., to erect addition to power-house; 20x172 feet; fireproof construction; cost \$22,570; cost of machinery (purchased) \$21,430; Ford, Bacon & Davis, engineers (F. J. Frost in charge), New Orleans, La. (Recently noted.)

Tex., Sinton.—R. V. Covey of Houston, Tex., and J. K. Ross of Oklahoma, purchased Sinton Ice & Power Co.; will operate as Sinton Ice, Light & Power Co., installing large dynamo to furnish electric lighting for entire city.

FERTILIZER FACTORIES

Ala., Marion.—Union Storage Co. plans organization of company to build fertilizer plant.

Ala., Marion.—Farmers' Union Warehouse Co. contemplates erecting fertilizer factory.

Ga., Culloden.—Culloden Ginning & Fertilizer Co., U. S. Fuller, president, will erect building; ordinary construction; plans by Jos. Davidson, Atlanta, Ga.; was recently noted incorporated. (See "Cotton Compresses and Gins.")

Ga., Eatonton.—Putnam Fertilizer Works organized to build plant; president, Thaddeus G. Greene; secretary-treasurer, T. C. Spivey.

N. C., Greensboro.—C. C. McLean, secretary Chamber of Commerce, has proposition from established company to build fertilizer factory.

S. C., Aiken.—Farmers' Storage & Fertilizer Co., G. E. Owens, manager, will open bids September 1 to erect fertilizer factory recently noted; 75x150 feet; ordinary wooden building; machinery mainly purchased; daily capacity, 150 tons of fertilizer. (See "Machinery Wanted.")

S. C., Gray Court.—Gray Court Oil & Fertilizer Co., G. W. Owings, manager, will operate fertilizer factory, etc. (See "Cottonseed Oil Mills.")

S. C., Trenton.—Trenton Fertilizer Co., J. B. Knight, president (recently noted to establish guano factory), has purchased building and will install machinery for dry-mixing plant; daily capacity 60 tons fertilizer. (See "Machinery Wanted.")

FLOUR, FEED AND MEAL MILLS

Ark., Moorfield.—Mack Mill Co. chartered with \$30,000 capital stock by Leon L. Mack, Malcolm E. Moore, W. A. Lindsey and others.

Ky., Auburn.—Auburn Mills chartered with \$3000 capital stock by J. G. Coke, Charles R. Bates, George Pottinger and David Scott.

Ky., Burnside.—Burnside Roller Mills chartered with \$10,000 capital stock by S. G. Vaughan, W. S. Philippi and Norman I. Taylor.

Ky., Greenville.—Home Milling Co. organized to build mill; three stories; reinforced concrete construction; 30x40 feet.

Okl., Clinton.—Eureka Flour Co. chartered by G. R. Caldwell, A. F. Sights, S. R. Hawks and others.

S. C., Gray Court.—Gray Court Oil & Fertilizer Co., G. W. Owings, manager, will operate meal mill, etc. (See "Cottonseed Oil Mills.")

Tex., Clint.—John Ponder will, it is rumored, build alfalfa mill.

FOUNDRY AND MACHINE PLANTS

Ky., Henderson.—Machine Shop.—Modern Machine & Vulcanizing Co. chartered by S. Loeb, A. Kleffer and J. H. Gillespie.

Ky., Louisville.—Brass Foundry.—Hillen Manufacturing Co. will be organized by Geo. F. Hillen; secured building at 318 E. Green St., and will equip for brass foundry to make plumbers' supplies.

Mo., Baltimore.—Page Engineering Co., 113-121 E. York St., awarded contract to Thomas B. Stanfield & Co., 109 Clay St., Baltimore, to erect machine shop; 40x100 feet and 28x28 feet; fireproof construction; cost \$8000; heating and lighting not in contract. (Recently noted.)

Mo., Kansas City.—Welding Plant.—Oxy-Acetylene Welding Co. incorporated with \$2000 capital stock by John H. Thompson, John McLeod and Nora Thompson.

N. C., Dunn.—Foundry.—John A. McKay Manufacturing Co. will erect foundry building 125 feet long, with two wings 30 feet long.

Okl., Oklahoma City.—Stoves.—Royal Stove Co. chartered with \$10,000 capital stock by C. L. Dickerman and J. R. King of Oklahoma City and Wilson Newman of Ardmore, Okla.

Tenn., Jackson.—Bronze and Iron.—Jackson Ornamental Iron and Bronze Works organized with \$25,000 capital stock to establish plant; president, J. C. Felsenthal; vice-president, W. R. Sparkman; secretary-manager, J. J. Lozier.

Tex., Houston.—Boiler Works.—Finuacne Boiler Works, St. Charles and Grove Sts., T. J. Finuacne, 2110 Providence St., proprietor (recently noted to establish boiler

works), awarded contract to H. D. Taylor Company to erect 75x100-foot building; mill construction; cost \$7000; cost of machinery \$18,000. (See "Machinery Wanted.")

Tex., Houston.—Log-handling Machinery.—Hiram Knox Company will build plant for manufacturing log-handling machinery; has plans for buildings and awarded contract for construction; H. H. Hall of New Orleans, La., will be manager.

GAS AND OIL DEVELOPMENTS

Ky., Louisa.—Hays Oil Co. chartered with \$10,000 capital stock by Tom Hays, G. R. Burgess, H. C. Sullivan and others.

La., New Orleans.—Von Schoeler Oil Co. chartered with \$50,000 capital stock; president, Don Caffery; general manager, Victor Von Schoeler.

Okl., Bigheart.—Red Eagle Oil & Gas Co. chartered with \$5000 capital stock by E. Hooper and T. Woodall of Bigheart and A. W. Hurley of Pawhuska, Okla.

Okl., Edmond.—Oklahoma Oil, Gas & Development Co. chartered with \$10,000 capital stock by F. M. Page, P. M. Holmes, E. A. Bender and L. B. Shallen.

Tex., Mineola.—Mineola & Hainsville Oil Co. chartered with \$50,000 capital stock by J. C. Edline, J. C. Chappel and Gus T. Bogan.

Tex., Stockdale.—Stockdale Oil Co. organized with \$10,000 capital stock to drill for oil on G. B. Palm's lands; purchased 150 acres for development.

W. Va., Parkersburg.—Stiles Bros. Oil & Gas Co. chartered with \$300,000 capital stock by Samuel B. Stiles, J. D. Porter, John Marshall and others. Samuel B. Stiles states company is not organized, but will take over property of Stiles Bros.; not ready to announce plans.

W. Va., Parkersburg.—Rhoda Oil Co. chartered with \$24,000 capital stock by J. T. B. Morrison of Parkersburg, Amos Bright and O. K. Sutton of Sutton, W. Va.; Albert Wilt and N. G. Klein of Elkins, W. Va.

ICE AND COLD-STORAGE PLANTS

Ark., Arkadelphia.—Arkadelphia Milling Co. will install ice factory.

Ark., Arkadelphia.—Arkadelphia Milling Co. will install ice factory.

Ark., Hoxie.—Hoxie Ice Co. will erect addition to increase plant's daily capacity to 40 tons ice.

Ga., Macon.—Southren Coal & Ice Co. organized with Glenn Toole manager; will erect building at 6th and Cherry Sts.; install machinery for daily capacity 85 tons ice; contemplates doubling in future; machinery contracts awarded at \$85,000.

Md., Baltimore.—Swift & Co. (main offices in Chicago, Ill.), Eutaw and Camden Sts., have plans and specifications for constructing proposed warehouse and office; bidders are B. F. Bennett Building Co., 123 S. Howard St.; Consolidated Engineering Company, Emerson Tower Bldg., and J. Henry Miller, Inc., 108 Dover St., all of Baltimore.

Miss., Hattiesburg.—Swift & Co., main offices at Chicago, Ill., will build cold-storage warehouse to cost \$10,000; one story; brick construction; 45x90 feet; has plans and specifications; Hugh McWilliams, local manager.

N. C., Lexington.—Crystal Ice and Ice-cream Co. chartered with \$50,000 capital stock by A. T. Cartland and others.

Va., Newport News.—J. Reynier, 25th St. and Washington Ave., awarded contract to Ottenheimer Bros., Newport News, to construct cold-storage plant in store; cost \$5000.

W. Va., Charleston.—Eureka Ice & Storage Co. chartered by Thomas Gatts, Harvey Riggs, S. T. Courtwright and Harry S. Wilson.

IRON AND STEEL PLANTS

Ky., Newport.—Metal Products.—Genuine Open Hearth Iron Metal Products Co. organized to sell rights of patent culverts and other metal products; officers not elected. (Recently noted chartered with \$25,000 capital stock by A. L. Andrews, care of Newport Rolling Mill Co., Newport, and others.)

LAND DEVELOPMENTS

Ala., Robertsdsale.—Giltner Plantation Co. chartered with \$6000 capital stock to grow Sumatra and Havana tobacco.

Ala., Dallas County.—Prairie Land Alfalfa Co. chartered with \$150,000 capital stock by Charles D. Elbridge of Myeraville, Md.; Frank A. Schwartz of Charles H. Kimberly and others; W. W. Poutney, president, 519 Evans Bldg., Washington, D. C.

Fla., Jacksonville.—City votes September 5 on \$20,000 bond issue for park improvements, 1911 issue; \$50,000 for parks, 1912 issue. Address The Mayor. (Lately mentioned.)

Fla., Manatee County.—Charles Fehr and Peter De Philp of Globe Land Co., Spring Valley, Ill., are reported as purchasing Manatee county land at \$100,000 for development by colonization.

Fla., Titusville.—Titusville Fruit & Farm Lands Co., E. W. Ellis, president (recently reported incorporated with \$300,000 capital stock), contemplates installation of portable sawmill, farm tractor, portable rock crusher, etc., in connection with development of 22,000 acres of land; will construct 50 miles of road; has machine to cut ditches 2½ to 80 feet wide; will also develop townsite on Indian River and subdivide 5000 acres into 5 and 10-acre tracts for agricultural purposes; E. M. Ohi has been engaged to conduct demonstration farm; no contracts; all work supervised by Mr. Ellis. (See "Machinery Wanted.")

Ga., Atlanta.—Fernwood Estates chartered with \$40,000 capital stock and privilege of increase to \$500,000 by E. E. Eagan, P. F. L'Engle and Charles P. Glover.

Ga., Augusta.—Monte Sano Realty Co. incorporated with \$50,000 capital stock by Paul Heymann of Chattanooga, Tenn.; Jules Heymann and Sam Baron of Augusta; purchased 60 acres land and will develop for residential suburb.

Ga., Waycross.—Detroit capitalists purchased 6000 acres land located 14 miles from Waycross; will divide and dispose of to Michigan farmers for development; sale effected through Wade H. Leahy, general passenger agent of Atlanta, Birmingham & Atlantic Railway, Atlanta, Ga.

La., Lafayette.—Baldwin Lumber Co., J. Allen Burnett, secretary-treasurer, Baldwin, La., will clear and develop Breaux estate, consisting of about 9000 acres of land for agricultural purposes, subdividing into farms of 100 to 200 arpents each; plant sugar-cane, hay and corn; install sawmill, erect houses, construct 12 miles of railroad, etc.

La., Shreveport.—Southwestern Pecan & Horticultural Corporation chartered with \$40,000 capital stock; branch offices in Coffeeville, Kans., and Kansas City, Mo.; president, Elmer E. Dick; vice-president, E. T. Ireland; secretary, W. T. Ship; treasurer, R. H. Muzzy.

Md., Steelton Park, P. O. at Sparrows Point.—Realty Sales Co., George A. Finch, president, 463 Calvert Bldg., Baltimore, Md., is incorporated with \$2500 capital stock to develop (recently noted) industrial suburb at Steelton Park, consisting of 31 acres of land; is receiving proposals for constructing avenues. (See "Machinery Wanted.")

Tenn., Johnson City.—William Swadley and Heber Thomas are, it is reported, planning to cultivate Master Knob (150 acres) for orchard.

Tenn., Memphis.—City voted \$275,000 bond issue for public playgrounds, parks, etc. Address The Mayor.

Tex., Barreda.—Samuel Spears, care of E. F. Rowson, Houston, Tex., purchased 22,000 acres land on St. Louis, Brownsville & Mexico Railroad; will probably construct irrigation canal, build town, etc.

Tex., Houston.—Chicago capitalists purchased 10,000 acres Jefferson county land at about \$30,000 and will develop; sale by C. Glenn Nichols of Houston.

Va., Galax.—New River Land Co. chartered with \$15,000 capital stock; president, R. L. Pickens; vice-president, B. F. Calaway; secretary, A. W. Woltz.

Va., Suffolk.—Suffolk Floral Gardens, H. M. Butler, president, will remove plant to site recently purchased, erect additional hothouses and install heating and sprinkler apparatus. (Recently reported incorporated with \$25,000 capital stock.)

LUMBER MANUFACTURING

Ala., Tuscaloosa.—Davis Lumber Co., Cottondale, Ala., is reported as to build plant.

Ark., Counsell.—J. H. Hammon Company chartered with \$80,000 capital stock by J. H. Hammon and others.

Ark., Hardy.—J. S. Ritchey of Colorado purchased 300 acres timber land (making 800 he now owns) for development; reported he will erect sawmill.

Ark., Kelso.—Perkins Land & Lumber Co. purchased timber land; will build sawmill and establish town; now has mill at Lacy Spur, Ark.

Fla., Titusville.—Titusville Fruit & Farm Lands Co., E. W. Ellis, president, will install portable sawmill. (See "Land Developments.")

Ga., Dublin.—W. W. Branch Veneer & Lumber Co. chartered with \$25,000 capital stock by William L. Branch of Dublin, W. T. Moore of Charleston, W. Va.; Guy Rolph of Huntington, W. Va., and others.

Ga., Douglas.—W. O. Willard, Liberty, S. C., is reported to have bought 10,000 acres and on Altamaha River, about 40 miles from Douglas, for \$102,500; will build sawmills and develop for colonization.

Ga., Houston County.—W. E. Wimpy, Atlanta, Ga., purchased 2600 acres land (Durham Place), containing 1600 acres white hickory, oak and pine; estimated to cut 10,000,000 feet timber.

Ga., Macon.—Shaw Bros. Company, H. K. Burns, secretary and treasurer (recently noted to rebuild burned lumber plant), is contractor and will erect proposed building with company's force; purchased power plant; will install machinery. (See "Machinery Wanted.")

La., Franklinton.—Solomon Brick & Lumber Co., Slidell, La., purchased 4000 acres timber land at \$50,000.

La., Lafayette.—Baldwin Lumber Co., J. Allen Burnett, secretary-treasurer, Baldwin, La., will install sawmill. (See "Land Developments.")

La., Many.—Rust Lumber Co. will rebuild lumber plant recently reported burned; erect 56x8-foot building; construction by company; will purchase and install two planers, resaw, edger and fan; daily capacity, 20,000 feet dressed lumber. (See "Machinery Wanted.")

La., New Orleans.—Howard A. Seagrave Incorporated with \$10,000 capital stock and Charles A. Frost, president; Ennis A. Seagrave, vice-president; Howard A. Seagrave, secretary-treasurer.

Miss., Ellisville.—Anderson Lumber Co., care of Walter Perry, Hattiesburg, Miss., purchased timber land containing 8,000,000 feet of timber at \$30,000.

Miss., Ellisville.—Perry-Frazier Lumber Co., W. B. Perry, president, will erect mill recently mentioned; small capacity; construction probably by company; mainly second-hand machinery.

Mo., Hollywood.—Laswell Land & Lumber Co. increased capital stock from \$20,000 to \$50,000.

N. C., Henderson.—Carolina Land & Lumber Co., W. T. Calkin, treasurer and manager, will establish plant to manufacture North Carolina pine roofer; machinery purchased; daily capacity 25,000 feet, to be increased to 50,000 feet. (Recently noted.)

N. C., Waynesville.—Haywood Land & Timber Co. incorporated with \$200,000 capital stock by Alden Howell and Coleman C. Cowan.

Okla., Oklahoma City.—Pioneer Coal & Timber Co. chartered with \$10,000 capital stock by H. G. Larsh, A. E. Larsh and J. A. Harbert.

Tex., Hockley.—William H. Bawer will It is reported, rebuild sawmill recently burned at loss of \$10,000.

Tex., Ledbetter.—Ledbetter Lumber Co. chartered with \$5000 capital stock by L. M. Matthews, R. E. Brooks and J. M. Powers, Jr.

Va., Fredericksburg.—Young-Schoonover Co. will build additional planing mill to double capacity; construction begun.

W. Va., Charleston.—C. L. Monger Lumber Co. plans increasing capital stock from \$400,000 to \$500,000.

W. Va., Springdale.—Fork Mountain Lumber Co. organized with George Stevenson, president; J. S. Young, vice-president; A. G. Williams, secretary-treasurer; will operate lumber plant. (Recently reported incorporated with \$50,000 capital stock.)

METAL-WORKING PLANTS

Tex., Dallas.—Metal Products.—Dallas Sheet Metal Manufacturing Co. incorporated with \$50,000 capital stock by E. P. Hubbard, Roy Butler and Franklin Ayers.

MINING

Fla., Nichols.—Phosphate.—The Phosphate Mining Co., Nichols and New York, will rebuild phosphate plant recently burned at loss of \$75,000; invest \$250,000 for new plant; fireproof buildings; frame and cement construction; awarded most of contracts for supplies, including machinery costing \$25,000; P. H. Fuller, Nichols, is placing orders; J. T. Kendrick in charge of construction.

Mo., Carterville.—Lead and Zinc.—American Davenport Company will build 1000-ton mill.

Mo., Joplin.—Jack Possum Mining Co. chartered with \$16,000 capital stock by J. N. Doty, James Rollor and W. J. Owens.

Mo., Joplin.—S. H. E. B. Mining Co. chartered with \$15,000 capital stock by Josiah Bennett, D. W. Perkins, Richard L. Dermeyer and others.

Mo., St. Louis.—Zinc.—Bangor Zinc Mining & Smelting Co. incorporated with \$30,000 capital stock by C. W. Dice, Gustave A. Robyn, John Ferris and others.

Mo., St. Louis.—Zinc.—Bangor Zinc Mining & Smelting Co. chartered with \$30,000 capital stock by C. W. Dice, Gustave A. Robyn, John Ferris and others.

Mo., Webb City.—Lead and Zinc.—S. Y. Ramage will build 400-ton mill.

Okla., Muskogee.—Gravel and Sand.—E. Klots Sand & Gravel Co. organized with W. L. Follett of St. Louis, Mo., as general manager, will develop gravel and sand pits on Arkansas River.

Va., Harrisonburg.—Stone.—Virginia Quarries Co. chartered with \$25,000 capital stock to quarry stone, manufacture lime, etc.; president, Charles E. Loewner; secretary-treasurer, R. D. Loewner, both of Harrisonburg; vice-president, H. C. Davison of Hutchinson, Kans.

MISCELLANEOUS CONSTRUCTION

Fla., Danla.—Canal.—Florida East Coast Railway Co. awarded contract to George T. Warner of Miami, Fla., to construct canal from Danla to East Coast Canal; 8500 feet long; two feet deep at low tide; 20 feet wide.

Florida.—Florida Coast Line Canal & Transportation Co., St. Augustine, Fla., and Room 29, 19 Pearl St., Boston, Mass., will complete canal from Matanzas Inlet to Halifax River, about 20 miles; approximately 1,200,000 cubic yards earth excavation; proposals received until 12 noon September 20 at St. Augustine office (See "Machinery Wanted.")

Ga., Atlanta.—Lake.—Daniel Carey, general manager Department of Parks, states that improvements to Oakland City and Grant parks will not be made until next spring. (Recently noted.)

La., Abbeville.—Wharf.—City invites bids until September 5 for constructing public wharf on river front; 150 to 200 feet long; Adolph Brasseur, Mayor.

La., Baton Rouge.—Levee.—Board of State Engineers, New Orleans Court Bldg., New Orleans, La., will receive bids until 1 P. M. September 4 for construction of following levee work; Kempe Levee, Tensas parish, right bank of Mississippi River, 60,000 cubic yards; Carolina Levee, Bossier parish, Red River, 75,000 cubic yards. (See "Machinery Wanted.")

La., New Orleans.—Levee Work.—Orleans Levee Board awarded contract for placing 2000 cubic yards earth in levee embankment to C. W. Bostrom, Algiers, La.

La., New Orleans.—Board of State Engineers awarded contracts as follows: At 17.69 cents per cubic yard, requiring 105,000 cubic yards earth, to raise and enlarge Delta to Martin levee, and at 29.39 cents per cubic yard, requiring 45,000 cubic yards earth, to raise and enlarge Martin levee, to Linnam & Bobbitt; at 43.40 cents per cubic yards, requiring 55,000 cubic yards earth, to raise and enlarge Hodges levee, to Clark & Harris; at 28 cents per cubic yard, requiring 90,000 cubic yards earth, for Diamond Island work, to Donovan & Daley; at 20.7 cents per cubic yard, 100,000 cubic yards contents required, for Lafourche district levee raising and enlarging, to Hercules Company; at 17.85 cents per cubic yard, 25,000 cubic yards required, for levee raising and enlarging, and at 1.15 cents per linear foot for 2500 feet revetment work, in Grand Prairie district, to Schayot & Meyers; at 13.90 cents per cubic yard to construct levee, requiring 25,000 cubic yards earth, in Plaquemines parish, to M. Cullen; at 89 cents per linear foot for enlargement and revetment work, in Plaquemines parish, to Pat H. Lyons; all of New Orleans.

Tex., Clarksville.—Earth Dam.—Red River Country Club, L. W. Groves, treasurer, invites bids until September 11 for constructing earth dam; about 50,000 cubic yards earth; plans, etc., on file. (See "Machinery Wanted.")

Va., Norfolk.—Landing.—Board of Control awarded contract at \$550 to Louis Lawson, Norfolk, to construct The Hague landing.

MISCELLANEOUS ENTERPRISES

Ala., Anniston.—Contracting, etc.—Houser Transfer & Coal Co. incorporated with \$10,000 capital stock to deal in coal, as contractor, etc.; purchased plant of R. O. Watson; B. R. Sawyer, general manager.

Ala., Birmingham.—Printing Plant.—Farmers' Union Guide, Birmingham, consolidated

with Progressive Farmer, Storkville, Miss.; will install large printing plant; John C. Henley will probably be president of new company

Ala., Birmingham.—Automobiles.—Birmingham Automobile Co. incorporated with \$10,000 capital stock; president, John B. Ransom; vice-president, George E. Bennie, both of Nashville, Tenn.; secretary-treasurer, S. J. Banks, Jr., of Birmingham.

Ala., Gadsden.—Oil Station.—Gulf Refining Co., main office at Pittsburg, Pa., purchased site (100-foot frontage) on Louisville & Nashville Railroad for construction of oil-distribution plant.

Ala., Gadsden.—Oil Station.—Texas Company, Houston, Tex., and New York, will construct oil-distribution plant.

Ark., Little Rock.—Grain Elevator.—Darrah Warehouse Co. has plans by and awarded contract to Kaucher, Hodges & Co., 150 Exchange Bldg., Memphis, Tenn., and 601 State Bank Bldg., Little Rock, to erect grain elevator; ironclad frame; cost \$10,000; cost of machinery (purchased) \$5000. (Previously noted.)

Ga., Atlanta.—Garage.—Ed Alfriend will erect garage; one story and basement; 100 by over 100 feet; plate-glass front; cost \$50,000; architect, Solomon-Norcross Company, Atlanta.

Ga., Atlanta.—Plumbing.—Wingate Plumbing Co. reported organized with \$1000 paid-in stock, with privilege of increasing to \$50,000.

Ky., Hickman.—Tobacco.—Kentucky Farmers' Tobacco Co. organized to pack natural tobacco in cartons; president, C. P. Shumate; secretary-treasurer, B. G. Hale, Jr.

Ky., Hopkinsville.—Automobiles.—Cayce-Jones Motor Co. chartered with \$10,000 capital stock by L. M. V. Cayce, H. W. Dorris, A. B. McDonald and Thomas C. Jones.

Ky., Louisville.—Automobiles.—Wilder Motor Car Co. chartered with \$5000 capital stock by Oscar Wilder, M. R. Wilder and Percy N. Booth.

Ky., Ferry House.—Ferry.—Aurora Ferry Co. chartered with \$4000 capital stock by F. D. Smith of Aurora, Ind.; Louisa Berkshire and W. T. Scott of Petersburg, Ky.

Ky., Whitesburg.—Publishing.—East Kentucky Publishing Co. chartered with \$2000 capital stock by W. B. Cook, Nathaniel Hale, William Hall and others.

La., Tallulah.—Levee.—Board of State Engineers, New Orleans (La.) Court Bldg., receives bids until 1 P. M. September 4 to construct following levee work recently noted on Mississippi River: Biggs levee, Madison parish, raising and enlarging, 90,000 cubic yards; Reid levee, Madison parish, raising and enlarging, 75,000 cubic yards. (See "Machinery Wanted.")

La., New Orleans.—Plumbing.—Mailhus & Co. chartered with \$10,000 capital stock; president, Joseph S. Gautreaux; vice-president, Joseph Mailhus.

Md., Baltimore.—Printing.—Hess Printing Co., South and Pratt Sts., increased capital stock from \$5000 to \$20,000.

Md., Baltimore.—Fly Screens.—Webb Fly Screen Manufacturing Co. organized with R. Prescott Webb, 207 W. Fayette St., as president; leased building at 3 Little Sharp St. and will equip with machinery to manufacture window and door fly screens. (See "Machinery Wanted.")

Md., Baltimore.—Garage.—Frederick Bauerschmidt, 1129 Hillen St., awarded contract to Chesapeake Iron Works, Severn and Bayard Sts., Baltimore, to erect two-story garage and hay loft; iron construction; slag roof; concrete foundation; fireproof.

Md., Baltimore.—Garage.—James W. Bowers, Jr., 16 E. Lexington St., plans to construct garage and warehouse at Biddle and Cathedral Sts.; to be occupied by Brown Taxicab Co., 413 N. Howard St.

Mo., Joplin.—Publishing.—Tribune Publishing Co. chartered with \$50,000 capital stock by Gilbert Barbee, Dan F. Dugan, Hugh J. Dabbs and others.

Mo., St. Louis.—Automobiles.—Electric Motor Car Co. chartered with \$10,000 capital stock by Noble H. Davis, Arthur E. Keller and A. B. Davis.

Mo., St. Louis.—Printing.—United Magazine Press leased four-story-and-basement 25x100-foot building at Main and Market Sts.; will equip for printing and publishing; James H. Brooks, president. (Lately mentioned.)

Mo., St. Louis.—Cleaning and Dyeing.—Four Cleaning & Dyeing Co. chartered with \$2000 capital stock by Chas. J. Le Compte, Joseph B. Abel, Raymond M. Prince and Frank Butcher.

N. C., Charlotte.—Industrial Plant.—Greater Charlotte Club, Clarence O. Kuester, president, contemplates organization of In-

dustrial Development Co. with \$50,000 capital stock to promote industries, erect building and furnish electricity for heat, power, etc.

N. C., Hertford.—Hardware.—Hertford Hardware Supply Co. chartered with \$50,000 capital stock by N. S. Fulford, R. L. Knowles, M. H. White and T. J. Sugg.

N. C., Greensboro.—Construction Company. Greensboro Construction Co. organized by John J. Dunnigan, J. A. Armfield and J. M. Hunt; to contract for constructing water-works, electric plants, etc.

N. C., Raleigh.—Printing.—News and Observer will add new deck to Hoe press, install another linotype machine and make other general improvements to printing equipment.

N. C., Wilmington.—Crematory.—City contemplates installation of crematory or incinerator; population 26,000; Joseph D. Smith, Mayor. (See "Machinery Wanted.")

Okla., Muskogee.—Automobiles.—Oklahoma Motor Wagon Co. chartered with \$10,000 capital stock by C. T. Chenevert, Chris M. Bradley and F. E. Fancher.

Okla., Oklahoma City.—Fountain Supplies. Western Fountain Supply Co. chartered with \$15,000 capital stock by Will W. Hatcher, H. H. Reznay and P. H. Coffery.

S. C., Marietta.—Grain Elevator.—R. Mays Cleveland will, it is reported, build large grain elevator.

S. C., Newberry.—Steam Laundry.—C. P. Pelham will establish steam laundry.

S. C., Sumter.—Automobiles.—Epperson Motor Co., G. T. Epperson, manager, 126 N. Main St., awarded contract to erect 20x100-foot brick building. (Recently reported incorporated.)

N. C., Winston-Salem.—Garage.—Paul X. Montague will build garage; one story; brick construction; metal roof; pressed-brick front with granite trimmings.

S. C., Newberry.—Garage.—C. F. Sumner and associates will build garage, workshop and warehouse; two brick buildings, each 50x90½ feet.

Tenn., Ducttown.—Publishing.—G. G. Hyatt will establish printing plant to publish newspaper.

Tenn., Nashville.—Printing Plant.—Folk-Keeling Printing Co. changed name to Williams Printing Co. and increased capital stock from \$40,000 to \$46,000.

Tex., Beaumont.—Steamboat Line.—Deepwater Transportation Co. chartered with R. W. Turnbow, president; J. B. Morrison, general manager; R. L. Wynne, secretary-treasurer; now constructing boat.

Tex., Brownsville.—Publishing.—Sentinel Publishing Co. chartered with \$2000 capital stock by D. H. Cummins, C. M. Pierce and Wm. E. Hawkins.

Tex., Dallas.—Farm Machinery.—Southern Minneapolis Farm Power Co., Charles M. Lowe, president, incorporated with \$30,000 capital stock to deal in farm power machinery, primarily gas tractors, engines, etc.; offices at Dallas and Houston, Tex.

Tex., Dallas.—Garage.—National Automobile Driving and Outing Club will erect clubhouse and garage to cost \$15,000. (See "Miscellaneous Structures.")

Va., Glamorgan.—Laundry.—C. M. Hudson, Box 12, contemplates establishment of laundry, etc. (See "Miscellaneous Factories and Machinery Wanted.")

Va., Glamorgan.—Brooms, etc.—C. M. Hudson, Box 12, contemplates establishment of broom factory and laundry combined. (See "Machinery Wanted.")

Va., Richmond.—Printing.—Southern Printing Co. chartered with \$25,000 capital stock and E. W. Gill, president; vice-president, Robert W. Waite; general manager, C. P. Howard.

Va., Richmond.—Gas Plant.—City has permit to erect one-story engine-house; brick construction; cost \$2500; 25x25; fireproof construction; contract awarded to N. G. Woodard; plans by Carneal & Johnson, Richmond; no new machinery needed; W. P. Knowles, superintendent of gas works, in charge.

W. Va., Hinton.—Garage.—Hinton Garage & Supply Co. chartered with \$5000 capital stock by L. W. Bayler, W. C. Hobbs, W. H. Garrett and others.

MISCELLANEOUS FACTORIES

Ala., Birmingham.—Grate Shakers.—Hughes Grate Shaker Co. chartered with \$200,000 capital stock to manufacture grate shakers; president and treasurer, C. R. Atkins; vice-president, H. E. McCormack; both of Birmingham; secretary, J. G. Hughes of Denver, Col.

Ala., Ensley.—Tools.—Bessolo Inven-

Co., W. L. Bessolo, president, Box 522, Birmingham, Ala. (recently noted organized with \$300 capital stock to manufacture combination monkey and vise wrench), will establish plant; location not determined; erect building; mill construction; cost \$3000; cost of machinery \$5000. (See "Machinery, etc., Wanted.")

Ala., Eufaula.—Gas.—City voted \$40,000 bond issue to improve gas plant and purchase electric-light plant. Address The Mayor.

Ala., Montgomery.—Baking.—Federal Biscuit Co., H. B. Grubbs, president, New York, purchased Thomas H. Carr's plant at 108 and 110 Bibb St.; will expend \$25,000 to enlarge and improve; manufacture bread and crackers; Dennis H. Carr, local manager.

Ark., Jonesboro.—Peanut Hulling.—Arkansas Peanut Growers' Association Peanut Hulling Co. organized to install peanut-hulling equipment; president, J. M. Jones; secretary-treasurer, R. H. Hancock.

Ark., Texarkana.—Glass.—Texas Glass Co. will increase equipment of plant from 35 to 40 blowers.

D. C., Washington.—Aeroplanes.—Dawson Motor Boat Co., K and Water Sts. S. W., will not establish aeroplane factory, as recently reported; includes aeroplane work in connection with boatbuilding, pattern and model making, etc.; plant in operation. (See "Machinery Wanted.")

Fla., Centralia.—Turpentine.—Home Naval Stores Co., G. A. Pettway, president, will utilize timber on 72,000 acres land in Hernando county for production of turpentine. (Recently noted.)

Ga., Atlanta.—Brooms.—Southern Broom Manufacturing Co., 192 Hemphill Ave., will erect building; one story; brick; cost \$3500; day labor.

Ga., Atlanta.—Skirts, etc.—Mitchell Manufacturing Co. increased capital stock to \$12,000; continues operation of established plant.

La., Clinton.—Creamery.—Nelson Milk Co., New Orleans, La., plans to establish creamery.

La., Shreveport.—Glass Jars, etc.—Shreveport Fruit Jar & Bottle Works Co. organized by John Schies and F. L. Tracy of Anderson, Ind.; will build plant with 30-hour capacity of 72,000 jars, etc.; erect buildings 100x100, 60x100, 100x120, 40x50, 60x80 and 70x150 feet; total floor space, 55,000 square feet.

Mo., Baltimore.—Chemicals.—Spar Chemical Co. chartered with \$60,000 capital stock by Harry E. Gilbert (Charles and Lexington Sts.), Harry P. Bassett, Bartlett B. James, Charles R. Woods and Thomas B. Hill. (Mr. Gilbert lately mentioned as interested in proposed feldspar plant.)

Mo., Chesterport.—Gas.—Louis Raffeto and Merritt Pharo plan construction of plant to furnish gas for light and heat.

Miss., Hattiesburg.—Ice Cream.—Purity Ice Cream Co. will erect additional building; install new machinery, add several cold storage rooms, etc.; has purchased some machinery.

Mo., St. Louis.—Envelopes, etc.—Commercial Envelope & Paper Box Co., Binghamton, N. Y., contemplates. It is reported, establishing branch factory.

N. C., Enfield.—Comforts.—B. T. Jones contemplates establishment of comfort factory. (See "Machinery Wanted.")

N. C., Henderson.—Automobiles.—Corbett Automobile Co. organized with \$250,000 capital stock; R. J. Corbett, president; Samuel Peace, vice-president; Augustus Zollhofer, secretary; W. A. Hunt, treasurer; now considering plans for buildings, machinery, etc. (Lately mentioned.)

N. C., Lexington.—Ice-cream.—Crystal Ice & Ice-Cream Co. chartered with \$50,000 capital stock by A. T. Cartland and others.

N. C., Newbern.—Drugs.—Savodine Company chartered with \$25,000 capital stock by Lester Duffy, E. H. Gorham and B. M. Duffy.

Okla., Oklahoma City.—Peanut Butter, Coffee Roasting, etc.—Russell-Duncan Jobbers' Mills, C. H. Russell, president, 605 W. Main St., purchased equipment for coffee-roasting, peanut butter and bottling plant; A. O. Campbell, contractor, is proceeding with erection of two-story 50x170-foot brick building of ordinary construction after plans by Layton & Smith, Oklahoma City. (Recently noted under "Flour, Feed and Meal Mills.")

Okla., Woodward.—Asphalt Refinery.—Miller Natural Asphalt Refining Co. chartered with \$900 capital stock by W. W. Miller, J. E. Parker, C. H. Reed and others.

S. C., Anderson.—Beverages.—Coca-Cola Bottling Co. chartered with \$15,000 capital stock; Charles W. Ellis, president; R. J. Ramer, secretary.

S. C., Charleston.—Clothing.—L. C. Peoples Clothing Co. chartered with \$30,000 capital

stock; L. C. Peoples, president; M. Hornik, vice-president.

S. C., Greenville.—Gas Plant.—Greenville Gas, Electric Light & Power Co. will build additional gas plant; awarded contracts to Ohio manufacturers; will lay additional mains and make other improvements.

S. C., Sumter.—Gas Plant.—Edward L. Richa, 215 Courtland St., Baltimore, Md., plans construction of gas plant.

Tenn., Chattanooga.—Aeroplanes.—Sather-Phillips Aeroplane Co. chartered with \$10,000 capital stock by G. J. Sather, Paul Address, J. E. Gross and others; will manufacture aeroplanes.

Tenn., Memphis.—Gum.—H. E. Winterton Gum Co. chartered with \$30,000 capital stock by H. E. Winterton, D. R. Hopper, W. M. Miller and others.

Tenn., Nashville.—Chewing gum.—Valentino Gum & Manufacturing Co. chartered with \$20,000 capital stock by J. L. Valentino, D. P. Wrenne, F. A. Smith, Bernard Mette and J. L. Valentino, Jr.

Tex., Waco.—Stalk Cutters.—J. G. Warfield will organize company capitalized at \$100,000 to establish plant for manufacturing stalk cutters.

Va., Basic City.—Tanning Extracts.—Gardner Extract Co. chartered with \$50,000 capital stock; president, John S. Pancake of Staunton, Va.; general manager, W. H. Gardner of Basic City; secretary, Lynn A. Beck of Staunton; treasurer, M. E. Bean, Basic City; will manufacture tanning extract; daily capacity 75 to 100 barrels; machinery purchased; opens proposals about November 1 for building of ordinary mill construction to cost \$30,000 with equipment.

Va., Columbia.—Louis H. Stoneman contemplates establishment of bottling plant and variety store. (See "Machinery Wanted.")

Va., Richmond.—Clothing.—Globe Clothing Co., Leon Dettelbach, president, 613 E. Broad St., will open proposals January 1 for 40x135-foot building; mill construction; cost \$35,000; plans by A. J. Hunt, Richmond; John T. Wilson Company, Richmond, probable contractors; temporary location of Globe Clothing Co., 8th and Broad Sts. (Company recently reported incorporated with \$25,000 capital stock.)

W. Va., Martinsburg.—Motor Cars.—Norwalk Motor Car Co. chartered with \$200,000 capital stock by T. W. Martin, F. A. Minor, G. W. McKown, Gray Silver and others.

W. Va., Wheeling.—Glass.—Hazel-Atlas Glass Co. holds meeting September 7 to vote on increasing capital stock to \$3,000,000 for enlargements and improvements.

W. Va., Wheeling.—Orchard Heaters.—Hamilton Orchard Heater Co. incorporated with \$30,000 capital stock; James L. Hamilton, president; N. P. Whitaker, vice-president; W. H. Abbott, secretary-treasurer.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

La., New Iberia.—Southwestern Traction & Power Co., New Orleans, La., is understood to have plans for construction of proposed repair shops.

ROAD AND STREET WORK

Ala., Cullman.—City contemplates construction of several additional miles of cement sidewalks. Address The Mayor.

Ala., Cullman.—Cullman county contemplates issuing \$500,000 of bonds to construct highway extending north and south across State. Address County Commissioners.

Ala., Decatur.—City and New Decatur will pave Lee street; City Engineer of New Decatur is preparing plans. H. A. Skeggs, Mayor.

Ala., New Decatur.—City will construct concrete sidewalks on Second Ave.; also pave streets and construct sidewalks in residence section. Address The Mayor.

Fla., Brooksville.—Town is completing arrangements for street improvements; \$21,000 available for paving and possibly \$9000 for sidewalks; Joseph N. Drew is engineer making surveys; W. A. Thaxton, Town Clerk. (Recently mentioned.)

Fla., St. Petersburg.—City receives bids until August 31 for grading, granite curbing and vitrified brick paving on various streets; plans, profiles, etc., in office of City Engineer; W. F. Divine, City Clerk. (See "Machinery Wanted.")

Ky., Frankfort.—Simpson County Fiscal Court appropriated \$9750 to construct Lincoln-Jackson highway; distance 14 miles, of which 12 is already plied.

Ky., Louisville.—Board of Public Works opens bids September 7 for street improvements costing \$29,500, and on September 6 for

sidewalk construction costing \$8000; asphalt construction with vitrified-block gutters.

La., Hammond.—City awarded contract to R. A. Reynolds (not of Reynolds & Ligon, as recently reported), Box 473, Beaumont, Tex., to construct 6½ miles of cement sidewalk.

La., Jeannette.—City will issue \$50,000 of bonds in accordance with election authorizing tax; plans constructing sidewalks and otherwise improving streets; J. M. Du-rocher, Mayor. (Recently mentioned.)

La., Point a la Hache.—Highway Department, State Board of Engineers, New Orleans, La., awarded contract at about \$160,000 to M. Gassaud, New Orleans, La., to construct shell road; width, 19 feet; thickness, one foot in center and three feet at edges. (Call for bids recently mentioned.)

Md., Baltimore.—Board of Awards awarded contract at \$254.55 to Filbert Paving & Construction Co., Charles and Lexington Sts., Baltimore, to resurface cobblestones on Guilford Ave. between 23d and 24th Sts. (Lately mentioned.)

Md., Baltimore.—Board of Awards receives proposals until September 6 for grading, curbing, guttering and asphalt macadam paving on Keyworth Ave., etc. Specifications can be obtained on application at office of Commissioners for Opening Streets, City Hall. (See "Machinery Wanted.")

Miss., Collins.—Board of Aldermen awarded contract to Boyd & Bradshaw, Collins, to build and maintain 19 miles of streets for three years; cost \$8000. (Recently mentioned.)

Miss., Vicksburg.—City will invite bids for laying 1500 feet of sidewalks. Address The Mayor.

Mo., Cross Timbers.—John Kugler, B. O. Taylor and G. A. Bliss are interested in plan to construct road from Springfield to Sedalia.

Mo., Columbia.—J. A. Hudson, S. F. Conly and John Dodd, Road Commissioners, called election for September 8 to vote on \$100,000 bond issue for road construction.

Mo., Fulton.—Fulton County Commissioners will call election to vote on \$100,000 bond issue for road construction.

Mo., Kansas City.—Board of Public Works awarded contract at \$2.84 per square yard to Parker-Washington Company, Kansas City, for paving 15th St. with wood blocks.

Mo., Neosho.—Newton County Highway Engineer, Gabe Brown, has prepared plans and specifications and invites bids until September 8 for constructing granite pavement, concrete gutter, etc.; plans, etc., in office of County Clerk. (See "Machinery Wanted.")

Mo., St. Louis.—Board of Public Improvements receives bids until September 8 to improve De Baliviere Ave.; plans, specifications, etc., on file. (See "Machinery Wanted.")

N. C., Burlington.—City sold \$35,000 of bonds (of previously voted \$60,000 bond issue) for street improvements; will construct streets and sidewalks. Address The Mayor.

N. C., Concord.—City has contracted for 450 square yards cement paving and 1000 feet curbing to cost \$2000. Address The Mayor.

N. C., Murphy.—Murphy Township Highway Commission has sold \$50,000 bonds recently issued, and engaged G. W. Scott, engineer of State Highway Commission, Chase City, Va., to prepare plans and specifications for road construction.

N. C., Salem, P. O. at Winston-Salem.—City Commissioners contemplate calling election to vote on \$10,000 bond issue for street improvements.

N. C., Winston-Salem.—Board of Aldermen apportioned \$57,500 for street improvements. (See "Water-works.")

Okla., Bartlesville.—City invites bids until September 6 for grading, curbing, guttering, paving, etc., on Osage Ave.; plans, specifications, profiles, etc., in office of City Engineer; contractor required to give \$6000 bond; J. V. Delametter, City Clerk. (See "Machinery Wanted.")

Okla., Bennington.—City invites bids until September 5 for constructing about 40,000 feet cement sidewalks; specifications on file with Town Clerk Jesse L. Slipes; lately mentioned. (See "Machinery Wanted.")

S. C., Fort Mill.—City is constructing 2000 square yards of cement pavement; contract awarded to J. W. Haas, Charlotte, N. C.; C. W. Requarth, engineer in charge; contemplate improving Main St. next year. L. A. Harris, Mayor.

S. C., Hampton.—Hampton county defeated proposed \$25,000 bond issue for road construction. Address County Commissioners.

Tenn., Elizabethton.—Carter County Court voted \$60,000 bond issue to construct county's link of Memphis-to-Bristol highway.

Tenn., Knoxville.—Knox County Road Commission awarded contract at about \$6000 to R. L. Peters of Knoxville to repair several roads.

Tenn., Memphis.—Board of Commissioners invites proposals until September 5 for street improvement, including 44,500 square yards asphalt, brick or wood-block pavement; 34,500 square yards concrete foundation; 1467 square yards bituminous macadam pavement; 11,700 square yards gravel or concrete pavement, etc.; specifications, profiles, etc., on file in office of City Engineer. (See "Machinery Wanted.")

Tenn., Nashville.—City awarded contract to construct 5000 linear feet granite curbing and sidewalks to M. J. Cunliff.

Tenn., Rogersville.—Hawkins county defeated proposed \$200,000 bond issue for road construction and improvement. Address County Commissioners.

Tenn., Rutledge.—Grainger County Pike Road Commissioners receive bids until September 2 for macadamizing 19 miles of highways; three sections; plans and specifications in engineer's office at courthouse; A. M. Nance, secretary to commission. (See "Machinery Wanted.")

Tenn., Trenton.—W. S. Waller, J. C. Bronough, G. W. Hatcher and others are planning construction of road from Trenton to Clarksville.

Tex., Abilene.—City invites bids until September 7 for paving Pine St. crossing of Texas & Pacific Railway; about 3611 square yards asphalt macadam, 510 feet cement gutters and 1091 feet oak headers; specifications at office of City Engineer, C. E. Leonard; this work lately mentioned. (See "Machinery Wanted.")

Tex., Bastrop.—City accepted plans for three blocks of concrete curbing and gutters and gravel macadamizing; receives bids until September 7; J. N. Jenkins, Mayor. (See "Machinery Wanted.")

Tex., Brownsville.—City awarded contract to Cresssted Wood Block & Paving Co., Gulfport, Miss., for paving; three-inch block on five-inch concrete at \$2.70. (Recently noted.)

Tex., Coleman.—City opens bids about October 1 for crushed rock street paving with concrete culverts; engineer not employed. Address The Mayor. (\$25,000 bond issue recently noted voted.)

Tex., Harlingen.—City will vote September 20 on \$10,000 bond issue for street improvements and \$22,000 for water-works and electric-light plant. Address The Mayor.

Tex., Lewisville.—Denton County District No. 1 will construct and improve about 65 miles of roads; John Sparks, County Commissioner, Garza, Tex. (\$75,000 bond issue recently noted voted.)

Tex., Mineola.—Wood County Commissioners' Court sold \$30,000 bonds recently issued and will arrange for road improvements; details not announced.

Tex., Wichita Falls.—D. E. Thomas, Commissioner, Precinct No. 1, states proposed bond issue did not carry, but it is contemplated that Legislature in special session will authorize vote on \$150,000 of bonds for road and street improvements in Precinct No. 1.

Va., Portsmouth.—Seventh Ward Board of Improvements, D. F. Appenzeller, chairman, is having specifications prepared by Bascom Sykes for street improvements to cost about \$50,000; grading, combined concrete curb and gutter, concrete walks, etc.; bids will be advertised.

Va., Pulaski.—City invites bids until September 5 for street grading, macadamizing, building steel and stone bridge, etc.; plans and specifications in office of Mayor John T. Loving. (See "Machinery Wanted.")

W. Va., Lewisburg.—City will expend \$16,500 for street improvement; bids received until September 8; J. V. Snyder, engineer in charge; Robert M. Bell, member of committee. (See "Machinery Wanted.")

W. Va., Logan.—City voted \$15,000 bond issue for street improvement; J. R. Baer, City Attorney. (Previously noted.)

SEWER CONSTRUCTION

Ala., Union Springs.—City will probably call election to vote on bonds to construct sewer system; now having surveys and preliminary estimates prepared by N. Tate Jones of Birmingham, Ala.; probably \$20,000 will be required.

Ark., Wynne.—Board of Improvement of Sewer District No. 1 issued \$50,000 of bonds for sewer construction; S. R. Curtis, clerk.

D. C., Washington.—District Commissioners awarded contract at \$33,800 for constructing sewers to Warren F. Brenizer Co., 141 Q St. N. W., Washington; sewers 5040 feet and

2 feet 6 inches to 5 feet diameter; brick and concrete construction.

Fla., New Smyrna.—City contemplates arranging bond issue for water supply, sewers and electric lighting. D. P. Smith is chairman of committee promoting movement.

Fla., Jacksonville.—City votes September 5 on proposed bond issue; \$195,000 for sewers, \$35,000 for water-works and electric-light plant and \$20,000 for park improvements, 1911 issue; \$100,000 for street improvements, \$100,000 for water-works and electric plant and \$50,000 for parks. Address The Mayor. (Lately mentioned.)

Fla., St. Petersburg.—City awarded contract to W. B. Williams to construct sewers 5600 feet long, and to Rogers Brothers for sewers 8000 feet long. (Lately mentioned.)

Ga., Lawrenceville.—City voted \$50,000 bond issue, \$15,000 being for sewerage system and \$35,000 for water-works; J. B. McCrary Company, 1311 Empire Bldg., Atlanta, Ga., is engineer in charge of construction. (Lately mentioned.)

La., Monroe.—City awarded contract to construct concrete conduit 12 blocks long to H. E. Markwood of Monroe.

La., Opelousas.—City voted \$40,000 bond issue to construct sewer system; E. B. Duboisson, president of Sewerage Commissioners. (Lately mentioned.)

Md., Baltimore.—Board of Awards receives proposals until September 6 for constructing storm water drains; contract No. 15; includes 965 feet 15 to 24-inch drains, 370 feet 12 and 15-inch inlet connections, etc.; specifications, etc., obtainable on application to office of Sewerage Commission, American Bldg. (See "Machinery Wanted.")

Md., Rockville.—Montgomery County Commissioners will consider sewer system for drainage area of Chevy Chase, Friendship Heights, Somerset, Drummond, Bethesda and Woodmont.

Miss., Greenville.—City defeated proposed \$25,000 bond issue to construct sewerage system. Address The Mayor.

Miss., Greenville.—City voted on issuing additional sewerage bonds. Address The Mayor.

Mo., Kansas City.—Board of Public Works awarded contract at \$6975 for constructing Country Club district sewer to Williams & Semple of Kansas City.

Mo., Kansas City.—Kansas City Terminal Railway Co. awarded contract at \$850,000 to Bernard Corrigan, Kansas City, to construct proposed O K Creek sewer; sewer diameter will be 25 feet.

Mo., St. Louis.—Board of Public Improvements awarded contract at \$29,872 to reconstruct Ferry St. sewer and construct branch sewer to Fruin-Colton Contracting Co., Laclede Bldg., St. Louis. (Lately mentioned.)

N. C., Salem, P. O. at Winston-Salem.—City Commissioners contemplate calling election to vote on \$10,000 bond issue for sewerage extension.

N. C., Winston-Salem.—Board of Aldermen apportioned \$42,000 for sewerage. (See "Water-works.")

Okla., Enid.—City Commissioners ordered City Engineer to prepare plans, specifications, profiles, etc., for construction of sewer in district No. 23.

Tenn., Maryville.—City will vote September 20 on \$30,000 bond issue to construct sewer system and \$75,000 to construct water-works. Address The Mayor.

Tenn., Nashville.—City awarded contract at about \$250,000 to E. T. Lewis Company, Nashville, to construct trunk sewer. (Lately mentioned.)

Tex., Bryan.—City voted \$20,000 bond issue to complete sewerage, light and water plant. Address The Mayor.

Tex., Corpus Christi.—City awarded contract at \$28,050 to Truehart & Jackson, Corpus Christi, to continue sewer system to completion.

Tex., Hillsboro.—City voted \$30,000 bond issue, \$5000 being for sewer system and \$15,000 for extending and improving water-works. Address The Mayor.

Tex., Rockdale.—City awarded contract for construction of sewer system to Hamilton Construction Co., Rockdale. (Recently mentioned.)

Tex., Teague.—Whitney & Duff of Greenville, Tex., have applied for franchise to construct sewer system.

Tex., Fort Worth.—City receives bids until September 5 for constructing portion of Rosedale-Magnolia storm sewer; 330 cubic yards concrete, 2900 cubic yards excavation and 1210 cubic yards back fill; plans, etc., on file; W. J. Estes, City Secretary. (See "Machinery Wanted.")

Va., Williamsburg.—City plans constructing or securing construction of sewer system and water-works. Address The Mayor.

W. Va., Bluefield.—City will lay sanitary and storm sewer through Hale Land Co. property; estimated at \$7000. Address The Mayor.

TELEPHONE SYSTEMS

Ky., Kirksey.—Kirksey Telephone Co. increased capital stock from \$1000 to \$2500.

Ky., Paducah.—West Kentucky Long Distance Telephone Co., Louisville, Ky., awarded contract for construction of 40-mile toll line; L. C. Griffiths, engineer. (Recently noted incorporated.)

Ky., Short Creek.—Short Creek Mutual Telephone Co. chartered with \$2000 capital stock by D. M. Young, S. T. Pryor, Isaac Perry and others.

Okla., Olive.—Bristow & Olive Telephone Co. chartered by W. T. Wilson, H. G. Mathewly, J. H. A. Dumas and C. S. Burnes.

Tex., Beaumont.—Southwestern Telegraph & Telephone Co., Houston, Tex., will build exchange; L. M. Kelcey, local manager.

TEXTILE MILLS

Ga., Atlanta.—Sheetings, etc.—Exposition Cotton Mills awarded contract to Griffin Construction Co., 1013 Candler Bldg., Atlanta, to erect loom shed; 100x213 feet; two stories; timber cornice; tar and gravel roof; mill construction; cost about \$20,000; architect, F. D. Milstead, 323 Empire Bldg., Atlanta; will install 10,000 spindles with looms, etc. (Lately mentioned.)

Ga., Barnesville.—Cotton Cloth.—Aldora Mills will erect two-story loom shed; 100x160 feet; brick mill construction; architect, F. D. Milstead, 323 Empire Bldg., Atlanta; award building contract August 31. (Previously reported as to expend \$150,000 to erect addition and install looms, etc.)

Ga., Dalton.—Cotton Goods.—George W. Hamilton, president of Crown Cotton Mills, is planning construction of 15,000-spindle mill, as reported lately. He advises Manufacturers Record nothing definite has been decided.

WATER-POWER DEVELOPMENTS

N. C., Lenoir.—Board of Trade is negotiating with H. L. Milner (said to represent Baltimore capitalists) relative to construction of water-power-electrical plant on Catawba River; plans furnishing 2000 horsepower by electricity in Lenoir.

Tenn., Maryville.—Maryville Electric Light, Heat & Power Co. organized with \$100,000 capital stock by John M. Clark and James A. Goddard of Maryville and J. G. and William Sterchl of Knoxville, Tenn.; plans constructing water-power-electrical plant at Abrams Falls, 25 miles from Maryville.

WATER-WORKS

Ala., Cullman.—City will make extension to water-works; drill deep well 720 feet, 10 inches in diameter, and install tower tank and air compressor; B. Kiel, superintendent. (See "Machinery Wanted.")

Fla., Fort Barrancas.—Quartermaster will receive bids until September 22 to extend water-works; information on application. (See "Machinery Wanted.")

Fla., Jacksonville.—City votes September 5 on proposed bond issue; \$25,000 for water-works and electric-light plant, \$195,000 for sewers and \$20,000 for park improvements, 1911 issue; \$100,000 for street improvements, \$100,000 for water-works and electric plant and \$50,000 for parks, 1912 issue. Address The Mayor. (Lately mentioned.)

Fla., New Smyrna.—City contemplates arranging bond issue for water supply, sewers and electric lighting. A. D. P. Smith is chairman of committee promoting movement.

Ga., Lawrenceville.—City voted \$50,000 bond issue, \$35,000 being for water-works and \$15,000 for sewerage system; J. B. McCrary Company, 1311 Empire Bldg., is engineer in charge of construction. (Lately mentioned.)

Ky., Hazard.—Hazard Light & Water Co. chartered with \$25,000 capital stock by Jesse Morgan, J. B. Hoge and T. S. Ward.

Ky., Nicholasville.—Nicholasville Water Co. increased capital stock from \$8000 to \$20,000.

Mo., Campbell.—City voted \$22,000 bond issue for water-works. Address The Mayor.

Mo., Maryville.—City voted \$100,000 bond issue to purchase established water-works or construct new system. Address The Mayor.

Mo., Monett.—City voted \$10,000 bond issue to improve water-works and electric-light plant. Address The Mayor. (See "Electric Plants.")

Mo., Princeton.—City voted \$7000 bond issue for water-works and electric plant extensions. Address The Mayor. (Lately mentioned.)

N. C., Charlotte.—Board of Water Commissioners awarded contract for about nine miles cast-iron pipe for Catawba River line, previously noted; price about \$130,000; engineer, Gilbert C. White, Durham and Charlotte, N. C.

N. C., Rutherfordton.—City will construct water-works recently noted; 120,000 gallons capacity; cost \$17,500; electrically operated pump-house, 15x15 feet; brick; cost \$750; cement reservoir; capacity, 200,000 gallons; bids opened about September 1 for equipment and about September 15 for construction; B. Parks Rucker, Charlotte, N. C., engineer in charge. (See "Machinery Wanted.")

N. C., Winston-Salem.—Board of Aldermen will apportion bonds as follows: \$60,000 for schools, \$42,000 for sewerage, \$37,000 for streets and \$20,000 for water improvements. (Bond issue of \$350,000 recently voted.)

Okla., Bokchito.—City voted \$12,500 bonds for water-works; bids opened August 29; pump-house; steel tower; daily capacity 50,000 gallons; A. W. Chesnut, chairman Water Commission.

Okla., Butler.—City votes September 5 on \$25,000 water-works bonds. Address The Mayor.

Okla., Hobart.—City, C. G. Long, Mayor, will expend \$30,000 on water-works construction; deep well; date of opening bids not fixed. Address City Clerk. (Recently noted.)

Okla., Muskogee.—City will construct 6,000-gallon water purifying and softening plant; bids received until September 5; T. P. Clonts, City Engineer; Alexander Potter, 114 Liberty St., New York, consulting engineer. (See "Machinery Wanted.")

Okla., Norman.—City voted \$12,500 bond issue for water-works extension. Address The Mayor.

Okla., Stillwater.—City voted \$15,000 bond issue for water-works extension. Address The Mayor.

Okla., Wainwright.—City will open bids September 7 for water-works recently noted; cost \$20,000; water supply adjoining town; capacity 50,000 gallons; reservoir capacity 8,000,000 gallons; 30,000-gallon tank; earth dam; 15x25-foot building; plans by Edgar M. Graham, Muskogee, Okla. Address A. A. Hurd, Mayor.

Tenn., Dayton.—City has estimates by Walter G. Kirkpatrick of Jackson, Miss., for construction of water-works according to his plans and specifications; cost estimated at \$24,564. (City lately noted as to vote on \$25,000 bond issue.)

Tenn., Maryville.—City will vote September 20 on \$75,000 bond issue to construct water-works and \$30,000 to construct sewer system. Address The Mayor.

Tex., Abilene.—City proposes filtration plant in connection with recently-noted water supply; lake will be developed at estimated cost of \$150,000 on new site of 400 acres four miles from city; W. O. Shackelford, Commissioner.

Tex., Alice.—City votes August 31 on \$20,000 bond issue for constructing water-works. Address The Mayor. (Lately mentioned.)

Tex., Bryan.—City voted \$20,000 bond issue to complete water, light and sewerage plant. Address The Mayor. (Recently mentioned.)

Tex., Chillicothe.—City receives bids until September 8 for construction of water-works recently noted; O'Neil Engineering Co., engineer in charge, 1503 Praetorian Bldg., Dallas, Tex. (See "Machinery Wanted.")

Tex., Fort Sam Houston.—P. W. Guiney, constructing quartermaster, will receive bids until September 26 for constructing extension to 10-inch distribution system about 3710 feet; plans and specifications on file. (See "Machinery Wanted.")

Tex., Harlingen.—City will vote September 26 on \$22,000 bond issue for water-works and electric light and \$10,000 for street improvements. Address The Mayor.

Tex., Hearne.—City will construct water-works recently mentioned; bids received until 3 P. M. September 4; plans by O'Neil Engineering Co., Praetorian Bldg., Dallas, Tex. (See "Machinery Wanted.")

Tex., Hillsboro.—City voted \$30,000 bond issue, \$15,000 being for improving and extending water system and \$5000 for sewer system. Address The Mayor.

Tex., Polytechnic.—City receives proposals until September 1 to furnish materials for water-works, for which bonds were recently voted; plant to include steel tower and tank for 100,000 gallons water, 9700 feet six-inch cast-iron pipe, 2100 feet eight-inch cast-iron pipe, etc.; specifications and bids

ders' blanks obtainable from Board of Commissioners; J. R. Thomas, Mayor, and John Mead, engineer. (See "Machinery Wanted.")

Tex., Saragosa.—Stump Robbins has franchise to construct water-works.

Tex., Teneha.—Commercial Club is considering proposition to construct water-works.

Va., Williamsburg.—City plans constructing or securing construction of water-works and sewer system. Address The Mayor.

W. Va., Wellsburg.—Water Board receives bids until September 1 to erect proposed power-plant; plans at office of Board and architect, M. L. Wells.

WOODWORKING PLANTS

Ky., Louisville.—Woodwork.—Norman Woodworking Co. chartered with \$25,000 capital stock by A. E. Norman, J. L. Dawson and J. V. Norman.

Md., Baltimore.—Mill Work.—Atlantic Mill & Lumber Co., 239 N. Forest St., will erect 30 by 57-foot factory building, covered with corrugated galvanized iron, and 30 by 50-foot shed of same construction; fireproof; concrete foundations; slag roofs; install machinery to manufacture mill work. (Lately mentioned.)

Miss., Hattiesburg.—Shuttle Blocks.—J. S. Price and D. L. Norris (of South Carolina) will establish plant to cut shuttle wood; reported machinery has been ordered.

Mo., Kirkwood.—Doors and Sash.—Kirkwood Sash & Door Co. chartered with \$12,000 capital stock by Charles R. Reid, Oscar Steger and C. H. Mueller.

N. C., Greensboro.—Sash Doors, etc.—Gulford Lumber Manufacturing Co. is rebuilding burned plant; ordinary brick construction; 70x200 feet, and addition; cost \$350; erection by owner; construction of 36x44-foot office building begun; main structure to be started within few days; engine and boiler supplied; manufacture sash, doors, blinds and building material. (Previously noted.)

N. C., High Point.—Furniture.—Tomlinson Chair Manufacturing Co. awarded contract to erect two factory buildings costing \$30,000 to Caldwell Company, Winston-Salem, N. C.; two and five stories of brick mill construction. (Lately mentioned.)

N. C., Henderson.—Sash, Doors, etc.—Vance Lumber Co. leased building and will install machinery to manufacture sash, doors, blinds, etc.

N. C., Mooresville.—Handles.—Kelly-Suffield Handle Co. of Charleston, W. Va., will build plant.

N. C., Washington.—Cooperage.—Caroline Cooperage Co. organized and purchased Atlantic Manufacturing & Stave Co.'s plant; has overhauled and improved plant; daily capacity, 40,000 staves; president, B. G. Moss of Washington; vice-president, L. W. Plummer of Waverly, Va.; secretary-treasurer, J. H. Dewees of Paoli, Pa.

Okla., Ardmore.—Crates.—Bigham & Read Manufacturing Co. leased three-story brick building and will manufacture egg crates; daily capacity, 1000 crates; install several sets of tinners' tools; E. T. Read, president; A. W. Bigham, vice-president; Homer Adams, secretary-treasurer; R. A. White, manager. (Recently noted incorporated with \$10,000 capital stock.)

Tenn., Cumberland Gap.—Wagons.—Pinnacle Wagon Manufacturing Co., Cincinnati, Ohio, is negotiating with Board of Trade relative to building plant.

Tex., Rusk.—Furniture and Wagons.—Penttential Commissioners have plans and specifications for erection of building to replace structure recently burned; three stories; concrete block construction; cost \$50,000; to be used for furniture and wagon manufacture.

Va., Newport News.—Veneers.—Williamson Veneer Co. of Newport News and E. Baltimore and 8th Sts., Baltimore, Md., chartered with \$50,000 capital stock; president, D. W. Williamson of Baltimore; vice-president, C. J. Cummins; secretary, O. D. Batchelor; both of Newport News; will continue to operate established veneer plant.

BURNED

Ark., Hot Springs.—Van Noy Apartment-house at Bath and Exchange Sts., owned by Captain Stitt.

Ark., Rison.—I. E. Moore's residence.

D. C., Washington.—George W. Knox Express Co.'s stables and warehouse at B, C and 2d Sts. N. W.; loss \$15,000.

Ga., Rome.—P. J. Sulcher's residence; loss \$3000.

Ky., Robards.—Thomas Robards' store; loss \$9000 to \$10,000; building owned by A. Brooks.

La., Mansfield.—A. M. Hewitt's residence; loss \$5000 to \$6000.
 Md., Bond.—North Maryland Lumber Co.'s plant; loss \$60,000.
 Md., Preston.—Willis Poole's residence.
 Md., Rising Sun.—Theodore Woolen's flour and saw-mill, machine shop, etc.; loss estimated at \$6000.
 Md., Riverdale.—Henry M. Presley's residence; loss \$3500.
 Md., Springfield.—C. P. Gorman's residence; loss \$5000.
 Miss., Enterprise.—William Lee's residence; loss \$10,000.
 Mo., Willow Springs.—Crescent Hotel, owned by A. W. Beecher; William J. Lemp Brewing Association's Bldg.; total loss \$7000.
 N. C., Rocky Mount.—Rocky Mount Sash & Blind Co.'s plant; reported loss \$60,000.
 N. C., Rocky Mount.—H. H. Duke's residence at 200 Battle St., owned by Mrs. I. C. A. King of Greenville, N. C.; loss \$3500.
 N. C., Statesville.—Statesville Lumber Co.'s plant; reported loss \$8000.
 Tenn., Athens.—Dr. J. L. Force's drug store; Vanhooser & Groves' restaurant; loss \$8000.

Tenn., Nashville.—Joseph Lightman's rock-crushing plant; reported loss \$10,000.
 Tenn., Ripley.—W. R. Miller's two buildings; loss \$4000.
 Tex., Aldridge.—Aldridge Lumber Co.'s plant; capacity 85,000 feet.
 Tex., Round Rock.—Dr. T. M. Harrell's residence; loss \$5000.
 Tex., Cameron.—Cameron Round Bale Co.'s cotton gin; loss \$2500.
 Tex., Fannin.—H. B. Hanley's store and warehouse, loss \$35,000 to \$40,000; Charles Smith's building, loss \$3000.
 Tex., Fort Worth.—Leslie Fitzgerald's residence at 2520 Hemphill St., loss \$3000; J. R. Andrews' residence at 2516 Hemphill St., loss \$4000; Frank Clark's residence at 2512 Hemphill St., owned by Dr. Lackey, loss \$3500.
 Tex., Gainesville.—R. M. Field's residence; loss \$6000.
 Tex., Round Rock.—Dr. T. M. Harrell's residence.
 Va., Harrisonburg.—Adam Turner's saw-mill; loss \$1500.
 Va., Petersburg.—Atlantic & Pacific Tea Co.'s building; loss \$5000.
 W. Va., Parkersburg.—Chancellor Hotel damaged; loss \$20,000.

CHURCHES

Ala., Birmingham.—West End Methodist Church will erect edifice; Sunday-school department, three stories; pressed brick; cost \$40,000 to \$50,000. Address The Pastor, West End Methodist Church.
 Ala., Citronelle.—Catholic congregation will erect edifice. Address The Pastor, Catholic Church.
 Ala., Tusculum.—Christian Church will erect edifice. Address The Pastor, Christian Church.
 Ky., Bowling Green.—Tenth St. Christian Church has plans by Dickey & Runge, Nashville, Tenn., for edifice; cost about \$25,000. (Recently noted.)
 Miss., Laurel.—First Methodist Episcopal Church is having plans prepared by A. F. N. Everett, Atlanta, Ga., for edifice; 50x120 feet; ordinary construction; brick; hot-air heat; electric lighting; tin roof; cost \$17,000; plans will be ready in three weeks. Address L. M. Jones or J. B. Bridges. (Previously noted.)
 N. C., Concord.—St. James Evangelical Lutheran Church, Rev. Charles P. MacLaughlin, pastor, has postponed date of opening bids until next spring to erect addition and improvements to edifice. (Recently noted to receive bids about August 15.)
 N. C., Williamston.—Mrs. James G. Staton opens bids in August to erect edifice; 52x70 feet; brick; steam or hot-air heat; electric lighting; cost \$5000; plans by Benton & Moore, Wilson, N. C.
 Tex., La Donna.—Trustees of Christian Church plan to erect edifice.
 Tex., Corpus Christi.—New Methodist Church will open bids to erect edifice; plans at office of Flanders & Flanders, Dallas, Tex., and J. D. Todd, Corpus Christi.

CITY AND COUNTY

Fla., Kissimmee.—Jail.—Osceola county receives bids until September 4 to remodel jail and install new cell work according to plans and specifications on file with Ludlam & McDonough, architects, Kissimmee; usual rights reserved; Arthur E. Donegan, clerk.
 Ga., Augusta.—City Stables.—Nislet Wingfield, Commissioner of Public Works, will receive bids until September 5 to erect two city stables; brick; near fireproof; 57x100 feet; one story; office 33x33 feet; completion by November 1; certified check for \$100. (Recently noted.)
 Ga., Macon.—City Hall.—Bridges Smith, City Clerk, receives bids until September 4 for improvements to city hall building; plans and specifications at office of Curran Ellis, architect, Birmingham; W. H. Fether, chairman of public property committee. (Recently noted.)
 La., Jonesboro.—Jail.—Jackson parish voted tax to erect jail; cost \$10,000; W. L. Bagwell, clerk. (Recently noted.)
 La., New Orleans.—Market.—F. J. White, Comptroller ad. int., receives bids until 11 A. M. September 11 for demolition of Dryades Market and erection of structure to replace same; brick construction; deposit of \$500 with City Treasurer and his receipt enclosed with bid; blank forms from City Engineer; plans and specifications at office of City Engineer. (Previously noted.)
 La., New Orleans.—Fire Station.—City will erect fire station at N. 5th St. and Louisville Ave.; Charles M. Kennedy, Comptroller.
 N. C., Rocky Mount.—City Hall.—City will soon award contract to remodel city hall. Address Mayor Ramsey.
 Okla., Muskogee.—City and County Building.—Muskogee county voted \$500,000 bond issue to erect building to be used jointly by city and county. Address The Mayor. (Recently noted.)
 S. C., North Augusta.—Fire Department.—Town is receiving bids to remodel interior of headquarters of fire department. Address Town Clerk.
 W. Va., Martinsburg.—Hosehouse.—Board of Affairs will probably erect hosehouse for Hose Company No. 5 at N. Queen and 2d Sts.; cost \$4000.

COURTHOUSES

Ala., Albertville.—Marshall County Commissioners, T. E. Orr, chairman, have plans by H. D. Breeding, Birmingham, Ala., for courthouse; 44x68 feet; ordinary construction; electric lighting; concrete sidewalks; cost \$4000; H. M. Johnson of Gadsden, Ala. (recently noted to have contract), is estimating. (See "Machinery Wanted.")
 Fla., Brooksville.—Hernando County Commissioners will award contract September 4 to erect courthouse; fireproof construction;

plans by Chamberlin & Co., Birmingham, Ala. (Previously noted.)

La., Jonesboro.—Jackson parish voted tax to erect courthouse; two stories; semi-fireproof; steam heat; cost \$50,000; W. L. Bagwell, clerk. (Recently noted.)

Okla., Muskogee.—Muskogee county voted \$500,000 bond issue to erect city and county building. (See "City and County.")

Tenn., Greenville.—Hunt County Commissioners will remodel interior of courthouse, install partitions in district courtroom, arrange sleeping-room for jury, etc.

Tenn., Nacogdoches.—Nacogdoches county, O. F. Baxter, County Clerk, will expend \$90,000 to erect courthouse; fireproof construction; plans by Lang & Witchell, 623 Wilson Bldg., Dallas, Tex. (Recently noted to receive bids until September 11.)

DWELLINGS

Ala., Birmingham.—Birmingham Realty Co. will erect residence; two stories; frame; cost \$4000.
 Ala., Birmingham.—Birmingham Realty Co. will erect residence; two stories; frame; cost \$4000.
 Ala., Birmingham.—H. M. Kennedy will erect residence; two stories; frame; cost \$3000.
 Ala., Leeds.—Haygood Bros. will erect residence and hotel; 19 rooms; two stories.
 Ala., Roanoke.—B. J. Hooten will erect residence.
 Ark., Springdale.—Jefferson Davis, Little Rock, Ark., contemplates, it is reported, erection of residence near Springdale.
 Ark., Little Rock.—Tom Fletcher has plans by W. D. Holtzman, Little Rock, for proposed residence and will award contract September 1 for construction; two stories; frame; slate roof; living-room, 1529 feet; 12-foot stair hall; colonial staircase; water and light system; fireplace 7 feet wide extending to ceiling.
 D. C., Washington.—Miss Margaret Cameron of New York has plans by J. H. De Silbour, Hibbs Bldg., Washington, for residence at 18th and P Sts. N. W.; brick and stone; tin roof; hot-water heat; electric lights; cost about \$50,000.
 D. C., Washington.—H. A. Kite, 1333 G St. N. W., has plans by A. H. Beers, 1342 New York Ave. N. W., Washington, for dwellings at 915-27 K St. N. E. to cost \$10,000, and five two-story brick dwellings at 37-43a K St. N. E. to cost \$10,000.
 D. C., Washington.—Robert I. Carr, 847 Upshur St. N. W., has plans by C. M. Chaney 1906 Rhode Island Ave. N. E., Washington, for dwelling at 709 Rock Creek Church Rd. N. W.; two stories; brick; cost \$2000; construction by owner.
 D. C., Washington.—Middaugh & Shannon, Colorado Bldg., has plans by Cloughton West, Oxford Bldg., Washington, for 15 dwellings at 915-27 K St. and 914-28 10th St. N. E.; two stories; brick; cost \$42,000.
 D. C., Washington.—Zepp Bros., 1327 F St. N. W., has plans by A. H. Beers, 1342 New York Ave. N. W., Washington, for 12 dwellings at 915-19 Euclid St., 776-780 Fairmont St. and 2601-2611 Sherman Ave. N. W.; two stories; brick; cost \$22,500.
 Fla., Jacksonville.—L. Engle Hartbridge will expend \$2750 to erect five four-room cottages; 18x36 feet; ordinary construction; plans and construction by owner. (Recently noted.)
 Fla., Green Cove Springs.—J. S. Smith, J. W. Lucas and T. M. Edwards purchased tourist hotel on St. John's River and will enlarge and remodel.
 Ga., Atlanta.—J. T. Daniel, 784 Peachtree St., will erect dwelling; one story; six rooms; frame; cost \$2500; day labor.
 Ga., Atlanta.—Harvill & Ferguson, 915 Empire Bldg., will erect 12 one-story frame dwellings; cost \$12,000; construction by owners. (See "Machinery Wanted.")
 Ga., Atlanta.—L. P. Gunn will erect dwelling; one story; frame; cost \$2350; day labor.
 Ga., Atlanta.—Mrs. L. M. Nichols will erect dwelling; two stories; frame; cost \$7000; day labor.
 Ga., Atlanta.—Frank Adair will open bids September 20 to erect dwelling; two stories; eight rooms and three baths; brick veneer; steam heat; electric lighting; slate or shingle roof; cost \$10,000; plans by Hertz R. Ried, 330 Candler Bldg., Atlanta.
 Ga., Lagrange.—J. D. Edmondson will erect residence; probable cost \$7500.
 Ga., Lagrange.—Hutton Lovejoy will erect residence; cost probably \$7500.
 Ga., Macon.—W. J. Beeland will erect residence; two stories; brick veneer and stucco; seven rooms; gas and electric lights; steam

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ala., Ensley.—General Realty Co. will erect two apartment-houses on Avenue E and at Hilltop.
 Ala., Mobile.—Louis Forchheimer will erect apartment-house.
 Fla., Jacksonville.—Dr. S. A. Morris will erect store and apartment building. (See "Stores.")
 Ga., Atlanta.—Dr. Joseph Jacobs will erect apartment-house and store; six stories; 100x100 feet; brick; cost \$100,000; architect not selected; construction will not begin until next spring.
 Ga., Savannah.—C. F. Fulmer will erect apartment-house; two stories; frame.
 Mo., St. Louis.—Pomeroy Building Co. will erect apartment-house in Washington Heights; three stories; cost \$25,000.
 Tex., Houston.—G. A. Hermann is having plans prepared by Glover & Son, Houston, for automobile salesroom and apartment building; three stories; brick; 127x85 feet; one-story garage in rear, 65x127 feet; lower floor for salesroom; upper floor for apartments.

ASSOCIATION AND FRATERNAL

Ark., Little Rock.—Nobles of Allyn Temple, Mystic Shrine, Ancient Free and Accepted Masons, will erect temple; Egyptian style.
 Ga., Americus.—Americus Lodge No. 13, Ancient Free and Accepted Masons, will erect lodge and opera-house building; four stories.
 Ga., Waycross.—Loyal Order of Moose will erect lodge building; J. E. Phelan, dictator.
 Md., Towson.—Ancient Free and Accepted Masons have plans by J. E. Lafferty, 11 E. Pleasant St., Baltimore, Md., for additions and alterations to Masonic Temple; addition two stories; brick; cost of improvements about \$5000. Contractors estimating are C. C. Watts, 113 W. Hamilton St.; E. G. Turner, Bateman Ave. near Garrison Ave.; John Cowan, 106 W. Madison St., all of Baltimore, Md., and Louis Woods.
 Miss., Pascagoula.—Pascagoula Lodge No. 120, Benevolent Protective Order of Elks, will erect lodge building.
 Mo., St. Louis.—William Schisler will erect apartment-house.
 Mo., St. Louis.—Hoffman Construction Co. will erect apartment-houses. (See "Stores.")
 Tenn., Chattanooga.—Young Women's Christian Association accepted plans by Barnwell & Jones, Chattanooga, for building; four stories with basement; brick, stone and concrete; fireproof; tile floor and marble wainscoting in front entrance and reception hall; roof garden; basement to contain gymnasium, equipment-room, shower baths and plunge; boiler-room, cold-storage department, etc.; steam heat; electric lights; electric elevator; cost about \$100,000. (Previously noted.)
 Tex., Fort Worth.—Ancient Free and Accepted Masons plan to erect Masonic Temple; at least six stories.
 Tex., Floydada.—Ancient Free and Ac-

cepted Masons are having plans prepared for lodge building; 50x100 feet; two stories; ordinary construction; cost \$10,000. (Recently noted.)

BANK AND OFFICE

D. C., Washington.—District Savings Bank, Bond Bldg., is having plans prepared for improvements and remodeling bank building, including new entrance, tiling to replace present floor; will install new fixtures, etc.
 Ga., Atlanta.—Lowry National Bank will expend \$40,000 to remodel interior of bank building, including installation of vault, Georgia marble counters and floors surmounted with bronze grill work; fireproof desks; metal filing devices; cork working floor; plans by Morgan & Dillon, Atlanta.
 Ga., Stephens.—Bank of Stephens, John F. Holden, president, Crawfordville, Ga., will erect bank building.
 Ky., Catlettsburg.—Jas. S. Patton will erect 24x52 foot office building; natural gas and stove heat; bids opened August 24. (Recently noted under "Stores.")
 La., Lake Charles.—Houston Ice & Brewing Co., Houston, Tex., will erect store and office. (See "Stores.")
 La., Lake Charles.—Delatte & Legrange will erect store and office building. (See "Stores.")
 Md., Baltimore.—Western National Bank, Eutaw St., near Fayette St., rejected all bids for improvements to bank building, and will receive new bids; plans by Haskell & Barnes, 301 N. Charles St., Baltimore. (Recently noted.)
 Miss., Laurel.—Commercial Bank & Trust Co. has plans to enlarge bank.
 Mo., Kansas City.—Kansas City Terminal Railway Co. will, it is reported, erect railway exchange building; probably 15 stories; site 300x200 feet.
 N. C., Marshville.—Carolina Bank, W. S. Blakeney, Bank of Union, Monroe, N. C., president, will erect bank building.
 Tex., Elmo.—State Bank, organized by Dallas (Tex.) capitalists, will erect bank building; construction begun.
 Tex., El Paso.—Southwestern Portland Cement Co. has plans by Trost & Trost, El Paso, for office building and boarding-house; reinforced concrete construction; cost \$6000 and \$4000, respectively.
 Tex., Greenville.—J. B. Murphy purchased Levy Bldg. for \$35,000; will remodel, erect additional story, install steam heat, electric elevator and plate-glass window.
 Tex., Houston.—Houston National Exchange Bank will, it is reported, erect bank and office building.
 Va., Roanoke.—Davis & Stephenson will erect office building; 40x85 feet; two stories; stone and terra-cotta front; terrazzo floors; two vaults; plans by Huggins & Bates, Roanoke.
 Va., Staunton.—Staunton National Bank, B. E. Vaughan, president, will improve interior of leased building previously noted; install vault and other equipment. (See "Machinery Wanted.")

or hot-air heat; brick basement; cost \$400; construction under supervision of owner.

Ga., Tifton.—O. C. Griner will receive bids to erect dwelling; two stories; 35x50 feet; brick veneer; electric lighting; cost \$5000; plans by Arthur N. Canton, Rhodes Bldg., Atlanta. (See "Machinery Wanted.")

Ga., Savannah.—Chatham Land & Hotel Co. will erect model residence; concrete.

Ky., Middlesboro.—Middlesboro Town Lands Co. will erect 10 cottages; five rooms; electric lights; cost \$1250 each; material will be purchased locally and contract let to local contractor.

La., Lafayette.—Baldwin Lumber Co., J. Allen Burnett, secretary-treasurer, Baldwin, La., will erect several dwellings in connection with development of 9000 acres of land. (See "Land Developments.")

La., New Orleans.—Joseph Vaccaro will erect residence.

Md., Annapolis.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will receive bids until September 19 to erect six cottages; for copies apply Navy pay office, nearest Navy yard.

Md., Baltimore.—A. Warren Edwards is having plans prepared by Jacob F. Gerwig, 210 E. Lexington St., Baltimore, for 12 dwellings at Carswell and Huntington Aves.; two stories; brick; 14x44 feet; electric lights; hot-water heat; cost \$22,000.

Md., Baltimore.—George Lewis is having plans prepared by C. M. Anderson, 321 N. Charles St., Baltimore, for residence at Howard Park; two and a half stories; frame construction.

Md., Baltimore.—Murray & Haynes, 1700 Ellamont St., have plans by M. H. Murray, 1700 Ellamont St., Baltimore, for dwelling on Allendale Ave. near Duvall Ave.; two and a half stories; frame; slate roof; hot-water heat; cost \$3000; construction by owner.

Md., Baltimore.—W. S. Townsend has plans by E. L. Palmer, 408 Roland Ave., Roland Park, Md., for cottage at Wallbrook; two and a half stories; frame; slate roof; hot-water heat; electric lights.

Md., Baltimore.—Provident Realty Corporation, Garrison and Piedmont Aves., is having plans prepared by Henry J. Tinley, 314 N. Charles St., Baltimore, for five cottages at Beulah Villas; two and a half stories; frame; also one on Elsinore Ave. 26x32 feet to cost \$4500; one at Rosslyn and Duvall Sts. 28x32 feet to cost \$4500, and bungalow on Elsinore Ave. 28x15 feet to cost \$4000.

Md., Baltimore.—Webb & White, Maryland Telephone Bldg., are having plans prepared by Henry J. Tinley, 314 N. Charles St., Baltimore, for two cottages at Hill Top Park.

Md., Baltimore.—E. J. Wachter is having plans prepared by Henry J. Tinley, 314 N. Charles St., Baltimore, for cottage at Ready and Duvall Aves.

Md., Hamilton.—Flamina Nicolai, 21 N. Rose St., and Joseph Serra, both of Baltimore, Md., are having plans prepared by Owens & Sisco, Continental Bldg., Baltimore, Md., for residence on Harford Rd.; two stories; brick and stucco.

Md., Lansdowne.—John E. W. Lindquist, 101 E. 25th St., Baltimore, Md., will erect \$5000 cottage.

Md., Roland Park.—E. E. Jackson, Jr., 108 Elmhurst Rd., will erect addition to residence; two stories and basement; porch; cost about \$6000. G. Walter Tovall, Dolphin St. and Eutaw Pl., Baltimore, Md., is estimating.

Md., Sherwood, P. O. Rider.—George R. Morris, Gunther Bldg., Baltimore, Md., is receiving sub-bids to erect proposed residence for George C. Carey; two and a half stories; frame; steam heat; electric lights; lower floors finished in hardwood.

Mo., Kansas City.—J. C. Stump will erect dwelling; stone veneer; cost \$5000.

Mo., Kansas City.—Frederick J. Hughes, 2935 Park Ave., will erect residence.

Mo., Kansas City.—C. E. Shepard, president of Arts and Crafts Society, will erect residence.

Mo., Kansas City.—Frederick Baker will erect two dwellings; stucco construction; cost \$10,200.

Mo., St. Louis.—Samuel Plant, 501 Chamber of Commerce Bldg., will erect 35x65-foot dwelling; fireproof construction; hot-water heat; cost \$25,000; architect not selected. (Recently noted.)

N. C., Gastonia.—Dr. T. C. Quickle will erect residence.

S. C., Columbia.—F. G. Gibbs will erect residence; frame; cost \$3500.

Tenn., Nashville.—Miller Dismukes will erect residence; eight rooms; brick; cost \$5000.

Tenn., Nashville.—H. G. Hill is having plans prepared by Thomas S. Marr, Nashville, for improvements to burned residence. (Recently noted.)

Tenn., Nashville.—Mrs. W. B. Walton, Jr., will erect residence; brick; cost \$7000.

Tenn., Nashville.—F. M. Robinson will erect residence; brick veneer; cost \$6000.

Tenn., Nashville.—E. E. Pearson will erect residence; two stories; brick veneer; cost \$3500.

Tenn., Nashville.—Grace Chester will erect residence; two stories; brick; cost \$3000.

Tenn., Etowah.—W. H. Price has plans and specifications ready for bids to erect two-story dwelling.

Tex., El Paso.—Mrs. Ida A. Anderson will erect residence; eight rooms; stone and brick; cost \$1500.

Tex., El Paso.—Dr. H. E. Stevenson will erect two cottages; brick; cost \$4200.

Tex., El Paso.—Southwestern Portland Cement Co. will erect boarding-house, etc. (See "Bank and Office.")

Tex., Gonzales.—T. J. Short of Floresville, Tex., will erect residence.

Tex., Groveton.—Hayne Nelms will rebuild residence; plans not determined. (Recently reported burned.)

Tex., Hearn.—W. B. Lewis will erect residence.

Tex., Houston.—Dr. Wm. A. Haley will erect residence; two stories; cost \$3000.

Tex., Houston.—W. T. Carter, Jr., will erect residence; eight rooms; cost \$8000.

Tex., Houston.—Sam L. Green will erect residence; nine rooms; cost \$3000.

Tex., Houston.—William A. Wilson will erect two five-room bungalows and five-room cottage; cost \$2500.

Tex., La Donna.—Dr. Collier of San Antonio, Tex., will erect residence.

Va., Norfolk.—Richard Tunstall is having plans prepared by Tox Bronte Everman, Union Trust Bldg., Washington, D. C., for residence; hot-air heat; electric lights; slate roof.

Va., Norfolk.—Mrs. Chas. McIntosh Tunstall is having plans prepared by Tox Bronte Everman, Union Trust Bldg., Washington, D. C., for dwelling; two stories; frame; slate roof; hot-air heat; electric lights.

Va., Richmond.—W. G. Meador will erect dwelling; two stories; brick; cost \$4000.

Va., Richmond.—E. K. Dunkel will erect residence; two stories; brick; cost \$4420.

Va., Richmond.—John Redmond will erect residence; two stories; brick.

Va., Roanoke.—Allison Ave. Investment Co. will erect dwelling; two stories; brick; cost \$3800.

Va., Suffolk.—William Crumpler will erect residence.

GOVERNMENT AND STATE

D. C., Washington.—Postoffice.—Treasury Department, Office of Supervising Architect, James Knox Taylor, Washington, D. C. Proposals received until 3 P. M. October 10 (extended date from September 15) to erect United States postoffice at Washington, in accordance with drawings and specifications, copies of which may be had at this office or at office of architects, D. H. Burnham & Co., Chicago, Ill., at the discretion of Supervising Architect; certified check for \$250. (Recently noted.)

Ga., Atlanta.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., will expend \$40,000 to repaint Federal building complete fifth story.

Ky., Frankfort.—Kitchen, etc.—State Board of Charitable Institutions of Kentucky is receiving bids to erect bakery, kitchen and dining-room at Institute for Feeble-Minded.

Tex., Carlsbad.—Tuberculosis Colony.—Anti-Tuberculosis Commission, Dr. Ralph Steiner, chairman, Austin, Tex., receives bids until 10 A. M. September 18 to erect buildings for tuberculosis colony.

Tex., Waco.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., will make improvements to Federal building, including new floor in main lobby, etc.

Va., Lynchburg.—Postoffice.—Government appropriated \$30,000 additional for changes in postoffice building under construction; will remove second-story walls, interior steel work and erect second and third stories of stone instead of stucco; James Knox Taylor, supervising architect of Treasury Department, Washington, D. C.

HOTELS

Ala., Birmingham.—Wilson R. Brown of Brown Bros. & Co. is interested in erection

of proposed hotel at Fifth Ave. and 20th St.; 10 to 14 stories; steel and brick; fireproof; cost about \$1,000,000.

Ala., Birmingham.—William Hood has plans by Miller & Martin, Birmingham, for proposed hotel at Fourth Ave. and 23d St.; four stories; 110 rooms, one-third of which will be equipped with private baths; 75x140 feet; hot and cold water in each room; cost \$125,000; contract to be awarded in about 30 days.

Ala., Leeds.—Haygood Bros. will erect hotel and residence. (See "Dwellings.")

Ark., Fort Smith.—Kenney Bros. will, it is reported, erect hotel and business building. (See "Stores.")

Fla., Miami.—L. T. Higleyman is reported to erect tourist hotel on Bricknell's Point, raise land four feet, construct seawall, throw shore line into bay about 300 feet and erect hotel near water; also reported to erect clubhouse and docks and to expend about \$1,000,000 for these improvements. Mr. Higleyman wires to Manufacturers Record: "Ground will not be in shape before January."

Ga., Atlanta.—Arthur N. Canton, Rhodes Bldg., Atlanta, is reported as preparing plans for hotel at Eids St. and Carnegie Way; 11 stories; fireproof; triangular shape; 125x200x146 feet; skeleton steel construction; brick, terra-cotta and stone; steam heat; ventilating system; gas and electric lighting; one freight and two passenger elevators; cost \$300,000; owner's name withheld.

Ga., Savannah.—Greater Savannah Hotel Co. opened bids to erect hotel; will have plans modified and probably award contract to Charles McCaul Company of Philadelphia, Pa. (lowest bidder); 10 stories; 90x120 feet; two passenger and one freight elevators; cost \$350,000; plans by W. L. Stoddart, 30 W. 38th St., New York. (Recently noted.)

La., New Orleans.—Baronne Realty Co. will, it is reported, erect annex to De Soto Hotel; 175 rooms.

Miss., Laurel.—J. Nelson of Silver Creek, Miss., purchased Laurel Hotel; will remodel and erect 16 or 20-room annex.

N. C., Bluemont.—Baptist Assembly, T. B. Bell, president, Atlanta, Ga., increased capital stock from \$50,000 to \$250,000, and will erect proposed hotel; about 100 rooms; cost \$25,000.

N. C., Montreat.—Montreat Association, R. C. Anderson of Gastonia, N. C., president, will erect hotel and additional auditorium; cost about \$50,000.

Tex., Bryan.—J. T. Maloney will receive bids through Alfred Giles Company, architects, San Antonio, until October 2 to erect reinforced concrete hotel.

Tex., Corpus Christi.—M. Little of Lampasas, Tex., will, it is reported, erect hotel; cost \$50,000.

Tex., Fort Davis.—Company organized with L. R. Peebles president will erect hotel; 150 rooms; cost about \$125,000; will also construct lake and stock with fresh-water fish.

Tex., Galveston.—Mrs. A. M. Meechem of San Antonio, Tex., purchased Seaside Hotel and will make improvements, installing elevators, etc.

Tex., Greenville.—W. L. Beckham, proprietor of Beckham House, will erect hotel to replace present structure; four stories; 37 outside rooms on each side; steel and reinforced concrete; fireproof; electric elevator; mission style; steam heat; cost \$125,000.

Tex., Longview.—Four States Insurance Co. purchased Moberly Hotel; will erect 40 additional rooms, install elevators, steam heat, hot and cold water in all rooms, baths in nearly half of rooms and electric lights.

Tex., San Antonio.—Lafayette Ward will, it is reported, erect tourist hotel on Bowen Island; 500 rooms.

W. Va., Grafton.—John T. McGraw will erect six-story hotel instead of five-story structure, as originally planned; plans by M. A. Long, B. & O. Bldg., Charles and Baltimore Sts., Baltimore, Md. (Previously noted.)

MISCELLANEOUS

Ala., Demopolis.—Exhibition Building.—Executive committee of Black Fair Association will erect exhibit building.

Ala., Guntersville.—Stable.—R. A. Hooper will erect stable; brick construction.

Fla., Tampa.—Stable.—J. R. Saunders will erect stable.

Ga., Waycross.—Clubhouse.—A. Clarke Snedeker is interested in erection of clubhouse at Homestead; cost not less than \$10,000.

Ga., Waycross.—Auditorium.—Company will be organized with initial capital of \$50,000 to erect proposed auditorium; at least four

stories; two balconies; seating capacity 4000 to 5000; L. J. Cooper, J. E. Wadley, A. M. Knight, M. L. Bunn and W. H. Buchanan, committee.

La., New Orleans.—Clubhouse.—Motor League of Louisiana, Purnell M. Milner, president, plans to erect clubhouse at Fort McComb; middle section one story, 300 feet long; two two-story wings; Spanish type; tiled roof; golf links; tennis courts and bath-houses; cost about \$20,000.

N. C., Montreat.—Montreat Association will erect hotel and additional auditorium. (See "Hotels.")

Okla., Pawnee.—Sanitarium.—Buffalo Park Sanitarium Corporation, recently reported incorporated with \$10,000 capital stock by W. M. Moore and others, has plans by Smith & Parr, Oklahoma City, Okla., for sanitarium; 168x64 feet; fireproof construction; vacuum steam heat; electric lighting. (See "Machinery Wanted.")

Okla., Oklahoma City.—Fair Buildings.—Oklahoma State Fair Association, I. B. Mahan, secretary, will, it is reported, expend \$100,000 for additional improvements at fair grounds during the year.

S. C., Orangeburg.—Fair Buildings.—Orangeburg County Fair Association is having plans prepared by H. Johannsen of Orangeburg for main building at county fair; no contract to be awarded; construction under supervision of association.

Tenn., Bristol.—Stable.—S. L. Millard and A. M. Hatcher will erect stable building; brick construction.

Tenn., Memphis.—Stock Buildings.—Memphis Union Stockyards Co. purchased site at Horn Lake Rd. and McEwore Ave., and will expend \$250,000 to construct stockyard buildings; will erect receiving barn 250x175 feet. (Previously noted.)

Tex., Brenham.—Hospital.—Drs. T. J. Pier and J. F. Beckmeyer purchased San Jacinto School building and will remodel and equip for hospital; initial accommodation for 15 patients; porch around main portion of building.

Tex., Dallas.—Clubhouse.—National Automobile Driving and Outing Club, W. L. Mathis, Grand Driver, will erect clubhouse and garage; cost about \$15,000.

Tex., Pecos.—Stables.—Pruett & Wadley will erect stable; two stories; reinforced concrete.

Va., Richmond.—Memorial.—Building Committee, Confederate Memorial Association, J. Taylor Ellison, president, 924 Mutual Bldg. (recently noted as rejecting all bids to erect battle abbey), will have plans ready for new bids about November 1; Bissell & Sinkler, 905 Bailey Bldg., Philadelphia, Pa., are architects.

Va., Richmond.—Clubhouse.—Westmoreland Club, John G. Farland, president, will expend \$4800 to erect roof garden.

Va., Roanoke.—Morgue.—John M. Oakley & Sons, Inc., have plans by Huggins & Bates, Roanoke, for morgue; chapel effect.

W. Va., Fairmont.—Clubhouse.—Fairmont Country Club organized by C. W. Watson, George T. Watson, M. L. Hutchinson and others; will erect clubhouse.

RAILWAY STATIONS

Ala., Attalla.—Alabama Railroad Commission submitted plans to Industrial Club for proposed depot.

Ga., Milledgeville.—Georgia Railroad, Thos. K. Scott, general manager, Augusta, Ga., will, it is reported, erect passenger and freight depot.

Ky., Guthrie.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will erect depot; cost about \$30,000.

Md., Baltimore.—Western Maryland Railway Co., H. R. Pratt, chief engineer, Hillen Station, Hillen and Exeter Sts., Baltimore, Md., is having tentative plans prepared by C. M. Anderson, 324 N. Charles St., Baltimore, Md., for proposed station.

Md., Cumberland.—Baltimore & Ohio Railroad, F. L. Stuart, chief engineer, Charles and Baltimore Sts., Baltimore, Md., will remodel Queen City Hotel and use western section for depot; waiting-room in front; baggage and express rooms in rear; offices on upper floors; umbrella shed from depot to tracks and over each track to distance of trains; trains reached by steps from subway under railroad crossing at Harrison St.; subway to be seven feet wide, nine feet high, lighted with electricity and cost \$26,000; tracks separated by railings; also construct freight depot and remodel eastern section of hotel for hotel purposes as at present; cost of passenger station and office portion improvements, \$50,000.

S. C., Greenville.—Greenville, Spartanburg & Anderson Railroad, J. W. Lee, vice-president, Charlotte, N. C., will erect proposed passenger station.

Tex., Hamilton.—St. Louis Southwestern Railway, C. D. Purdon, chief engineer, Tyler, Tex., will, it is reported, erect depot and extend trackage facilities.

Tex., Pecos.—Texas & Pacific Railway, B. S. Wathen, chief engineer, Dallas, Tex., will erect 40-foot additional freightroom to depot under construction and previously noted.

Va., Suffolk.—Atlantic Coast Line Railway, E. B. Pleasants, chief engineer, Wilmington, N. C., will, it is reported, erect passenger station.

SCHOOLS

Ala., Foley.—Trustees of Foley Academy, Frank Feiler, chairman, will construct six-room academy on unit plan; two rooms to be erected at present; two stories; cost \$250; preliminary plans being made.

Ala., Brundidge.—City will erect brick building for county high school; cost \$12,000. Address The Mayor. (Recently noted.)

Ala., Cuba.—Dan F. Delaine is interested in erection of school for negroes.

Ark., Fort Smith.—City will erect addition to high-school building; two stories and basement; 70x70 feet. Address The Mayor.

Ala., Monroeville.—City will erect brick building for county high school; cost \$8,000. Address The Mayor. (Recently noted.)

Ark., Gillham.—Gillham special school district will issue \$10,000 of bonds to erect school. Address District School Trustees.

Ark., Harrison.—School Board adopted plans for \$20,000 school and improvements to present structure; will award contract September 9. (Recently noted.)

Fla., Gainesville.—Proposals received by board of trustees of Sub-School District No. 26, Alachua county, Florida, until 12 noon September 30, and then opened, to erect two-story-and-basement brick school building; bids to be addressed to W. W. Hampton, chairman, and sent to J. H. Vidal, secretary of the board, Gainesville; certified check for \$500; plans and specifications secured on application to J. H. Vidal, secretary of the board, or from Architects McClure & Holmes, 115 E. Bay St., Jacksonville, Fla.; usual rights reserved.

Fla., Gainesville.—University of Florida is planning to erect three additional buildings.

Ga., Athens.—Black Mammy Memorial Institute, Samuel Harris, principal, will expend \$15,000 to erect industrial school for colored youths, and \$10,000 each for two dormitories. (Previously noted as having plans for school building by J. W. Barnett, Athens.)

Ga., Blue Ridge.—Georgia Baptist Assembly, E. G. Willingham, president of trustees, Atlanta, Ga., will probably erect industrial college for women.

Ga., Forsyth.—Banks Stephens Institute will erect \$25,000 addition.

Ga., Sylvester.—City will vote September 12 on \$5000 bond issue for school improvements. Address The Mayor.

Ky., Louisville.—Jefferson County Board of Education will erect proposed Rogers Clark Memorial Consolidated School, to cost \$15,000.

Ky., Newport.—Anton Riegs, 2554 Vine St., Cincinnati, O., prepared plans for St. Stephen's School on Washington Ave.

La., Amite.—Tangipahoa parish voted special tax for school improvements. Address Police Jury.

La., Jonesboro.—Jackson parish voted special school tax; W. L. Bagwell, clerk.

Md., Baltimore.—City will soon begin erection of proposed school No. 6 on Ann St. near Eastern Ave.; cost \$80,000; Edward D. Preston, Inspector of Buildings, City Hall.

Md., Baltimore.—City has revised plans by F. E. and H. R. Davis, 220 St. Paul St., Baltimore, for school on S. Ann St.; 16 classrooms; cost \$80,000; also plans by Alfred Cookman Leach, 323 N. Charles St., Baltimore, for No. 22 School at Hamburg and Wyeth Sts.; 24 rooms; cost \$125,000. (Previously noted.)

Mo., Kansas City.—Board of Education, J. Crawford James, president, contemplates erection of proposed Northeast High School building.

Mo., Rolla.—Edward Kahlbaum, secretary of executive committee of Schools of Mines and Metallurgy, will receive bids until 9 A. M. September 11 to erect library building; plans and specifications at office of secretary at Rolla and of George W. Hellmuth, architect, St. Louis, Mo., or may be had on deposit of \$25. (Recently noted.)

N. C., Albemarle.—City has plans by Barber & Ryno, Knoxville, Tenn., for proposed school.

N. C., Chapel Hill.—University of North Carolina has plans by Milburn-Helster & Co., Home Life Bldg., Washington, D. C., for proposed building.

S. C., Raleigh.—University of North Carolina, F. P. Venable, president, will expend \$50,000 to erect building.

N. C., Clemmons.—Forsyth County School Board will erect school; W. B. Speas, county superintendent of public instruction, Winston-Salem, N. C.

N. C., Salem, P. O. at Winston-Salem.—City will probably consider election to vote on \$30,000 bond issue to establish graded school system. Address Salem Commissioners.

Okla., Wainwright.—City will erect school building of ordinary construction; architect not selected. Address The Mayor.

S. C., Ebenezer.—Ebenezer School District voted tax for school improvements. Address District School Trustees.

S. C., Lexington.—T. P. Meetze, chairman of trustees of Lexington School District No. 1, will receive bids until noon September 25 to erect two-story brick or stone school; plans and specifications at office of G. Lloyd Preacher, architect, Augusta, Ga., or at Home National Bank, Lexington, or may be had on deposit of \$10; Karl F. Oswald, secretary; S. M. Gross, treasurer.

Tenn., Jackson.—S. P. Anderson, chairman of building committee, receives bids until noon September 12 to erect high-school building; certified check for 1 per cent. amount bid; plans and specifications at office of R. A. Heavner, architect, Jackson, Tenn., or may be had on deposit of \$10. (Recently incorrectly noted under Miss. Jackson.)

Tex., Alvin.—City will erect school. Address School Board.

Tex., Hale Center.—Hale Center Independent School District will expend \$18,000 to erect school building; 65x78 feet; fireproof construction; two stories and basement; seven rooms and auditorium; steam heat; electric lighting; plans by O. G. Roquemore, Amarillo, Tex. (Recently noted to receive bids until September 1.)

Tex., Temple.—School trustees have plans for 10-room brick-veneered school for negroes and brick ward school in South Temple, to cost \$10,000.

Va., Portsmouth.—Bids received by Washington District School Board of Norfolk County, at office of County Treasurer, until 11 A. M. August 30 to erect eight-room brick school near Oakdale; certified check for \$300, payable to T. W. Butt, clerk of board; plans and specifications at office of Lee & Diehl, architects, Seaboard Bank Bldg., Norfolk, Va., or may be had on deposit of \$25; A. H. Foreman, division superintendent.

Fla., Tampa.—G. Ferlita purchased site on Zack St. and Nebraska Ave. and contemplates, it is reported, erecting several stores.

Ga., Atlanta.—Dr. Joseph Jacobs will erect store and apartment-house. (See "Apartments.")

La., Jennings.—W. Krielow will erect business building; one story; brick; 30x134 feet; lower front of plate glass; mill construction; stoves; gas and electric lighting; cost \$10,000; plans by T. C. Carter, Lake Charles, La.; will let contract September 1.

La., Lake Charles.—Delatte & Legrange will erect store and office building; 50x100 feet; two to four stories; brick.

La., Lake Charles.—Houston Ice & Brewing Co., Houston, Tex., will erect store and office building; two stories; brick; 30x119 feet.

La., Lake Charles.—Charles and Edwin Martin of Martin Bros. will erect store building; brick.

La., Oak Ridge.—Barham & Co., Ltd., will erect business building; brick.

Md., Baltimore.—B. Mayer, 532 N. Gay St., has plans by John Freund, Jr., 210 E. Lexington St., Baltimore, for department store on Gay St.; contractors estimating are Consolidated Engineering Co., second floor Emerson Tower Bldg.; Charles J. Stockhausen, 1 National Marine Bank Bldg.; Maryland Contracting Co.; Charles Milske, 232 N. Chester St.; W. H. Porter, 505 Forrest St.; T. B. Standfield & Co., 100 Clay St.; Henry L. Maas, 1119 Ensor St., all of Baltimore. (Previously noted.)

Mo., St. Louis.—George Warren Brown, president of Brown Shoe Co. is reported as contemplating erection of business building at 16th, 17th, Locust and Olive Sts.

Mo., St. Louis.—Hoffman Construction Co. will erect apartment and business buildings on Athlone Ave.; cost \$10,000.

N. C., Concord.—Dr. M. L. Marsh will erect store building; two stories; brick.

N. C., Mount Pleasant.—C. G. Leutz will erect business building; double room; brick and granite front.

N. C., Mount Pleasant.—Ed. Crowell will erect business building; two stories.

S. C., Orangeburg.—U. G. Bryant, Raymond Bryant and Frank C. Bryant will erect building; 110x76 feet; brick; lower floor for store; upper floor probably for opera-house.

Tex., Berclair.—McCammon Mercantile Co. will erect business building.

Tex., Dallas.—Schomerus & Atkins have plans by Brickey, Bryan & Brickey, Practorian Bldg., Dallas, for business building; two stories; brick; cost \$7500.

Tex., Elgin.—P. Bassitt will erect business building; brick construction.

Tex., Houston.—G. A. Hermann is having plans prepared by Glover & Son, Houston, for salesroom and apartment building. (See "Apartment-houses.")

Tex., Luling.—F. A. Heise will erect business building.

Tex., Pecos.—Prewitt & Wadley will erect business building; two stories; concrete; construction begun.

STORES

Ala., Birmingham.—J. B. Garden will erect building; two stories; brick; cost \$8000.

Ala., Cullman.—J. M. Kilpatrick will open bids in December or January to erect business building; 27x100 feet; brick; cost \$5000 to \$7000. (Recently noted.)

Ala., Cuba.—Dr. Vaughan has plans by P. J. Krouse, Meridian, Miss., for three stores; brick; one story.

Ala., Gadsden.—North Alabama Grocery Co. will erect business building; two to three stories; brick; cost about \$8000.

Ala., Jemison.—J. H. Patton, Jr., will erect store building.

Ala., Jemison.—J. L. Webb and W. E. Thomas will erect three two-story brick store buildings; 28x70 feet; ordinary construction; cost \$6000. (Recently noted.)

Ark., Fort Smith.—Frank Doujak will erect business building.

Ark., Fort Smith.—Kenney Bros. will, it is reported, erect business and hotel building; three stories; 70x102 feet.

Ark., Little Rock.—Lincoln Drug Co. is having plans prepared by H. J. Harker, Little Rock, to remodel store building; will erect additional story.

Fla., Jacksonville.—Dr. S. A. Morris will erect store and apartment building; two stories; brick; 95x53 feet.

Fla., Largo.—H. A. Kilgore will erect business building; two stories.

Fla., Tampa.—James M. Jackson will erect business building.

Fla., Tampa.—G. Ferlita purchased site on Zack St. and Nebraska Ave. and contemplates, it is reported, erecting several stores.

Ga., Atlanta.—Dr. Joseph Jacobs will erect store and apartment-house. (See "Apartments.")

La., Jennings.—W. Krielow will erect business building; one story; brick; 30x134 feet; lower front of plate glass; mill construction; stoves; gas and electric lighting; cost \$10,000; plans by T. C. Carter, Lake Charles, La.; will let contract September 1.

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La., Lake Charles.—Charles and Edwin Martin of Martin Bros. will erect store building; brick.

La., Oak Ridge.—Barham & Co., Ltd., will erect business building; brick.

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S. C., Orangeburg.—U. G. Bryant, Raymond Bryant and Frank C. Bryant will erect building; 110x76 feet; brick; lower floor for store; upper floor probably for opera-house.

Tex., Berclair.—McCammon Mercantile Co. will erect business building.

Tex., Dallas.—Schomerus & Atkins have plans by Brickey, Bryan & Brickey, Practorian Bldg., Dallas, for business building; two stories; brick; cost \$7500.

Tex., Elgin.—P. Bassitt will erect business building; brick construction.

Tex., Houston.—G. A. Hermann is having plans prepared by Glover & Son, Houston, for salesroom and apartment building. (See "Apartment-houses.")

Tex., Luling.—F. A. Heise will erect business building.

Tex., Pecos.—Prewitt & Wadley will erect business building; two stories; concrete; construction begun.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Ark., Little Rock.—J. H. Laveck of Argenta, Ark., has contract to erect proposed Kimball Apartments on Center St.

Ark., Little Rock.—Joe Jung awarded contract to Lamberson & Phillips, Little Rock, to erect apartment-house; two stories; brick; cost \$10,380.

ASSOCIATION AND FRATERNAL

Ala., Whistler.—Bowen Lodge, Ancient Free and Accepted Masons, have plans by and awarded contract to A. W. Brown, 56 Marion St., Mobile, Ala., to erect Masonic Temple; 32x70 feet; two stories; ordinary brick construction; cost \$5000. (Recently noted at Mobile, Ala.)

BANK AND OFFICE

Ga., Crawford.—Farmers' Bank awarded contract to J. F. M. Watson, Winterville, Ga., to erect bank building.

Ga., Eastman.—Citizens' Bank awarded contract to J. H. Hargrove, Eastman, to remodel bank building; cost \$5000.

Ga., Macon.—Dr. W. G. Lee awarded contract to R. H. Smalling & Sons to erect building to be occupied by Chamber of Commerce and stores; 52x111 feet; two stories and basement; steam heat; electric lighting; concrete sidewalks and sidewalk lights; elevator lifts from sidewalks to basement;

Tex., Timpson.—Taylor Johnson will erect business building; brick construction.

Tex., Timpson.—W. D. Wade will erect business building; brick construction.

Tex., Timpson.—Reed & Whitton will erect business building; brick construction.

Tex., Timpson.—E. T. Coleman will erect business building; brick construction.

Va., Richmond.—Miss Mary Lou Jenkins will erect five stores; two stories; brick; cost \$6000.

W. Va., Parkersburg.—Star Grocery Co. has plans by R. H. Adair, Parkersburg, for addition to store building; two stories; brick; 45x85 feet.

THEATERS

Ga., Americus.—Americus Lodge No. 13, Ancient Free and Accepted Masons, will erect lodge and theater building; four stories.

Ga., Savannah.—Savannah Picture Play Co. incorporated with \$8000 capital stock by Abe S. Guckenheimer, Jake Schrameck and A. R. Boone.

N. C., Raleigh.—H. E. Litchford, J. R. Rogers, R. W. Winston and F. K. Ellington purchased Academy of Music property; plan to organize company and expend \$50,000 to erect new theater and remodel and improve present structure.

S. C., Orangeburg.—U. G. Bryant, Raymond Bryant and Frank C. Bryant will erect store and probably opera-house. (See "Stores.")

Tex., Waco.—J. M. Nix will expend \$10,000 to remodel theater; 55x100 feet; semi-fireproof construction; improvements include redecorating and installation of new fixtures. (Recently noted.)

WAREHOUSES

Ala., Bessemer.—Board of Trade, Captain Crook, president, is interested in erection of proposed cotton warehouse, camping-house and shed; W. W. Hollingsworth, J. W. Harden and I. A. Lewis, committee.

La., Maxie.—Farmers' Warehouse Co. incorporated with \$25,000 capital stock; F. M. Broussard, president; Frank Bollich, vice-president; James Amy, secretary; W. A. McClelland, Jr., treasurer.

Md., Frederick.—Mountain City Mills will erect warehouse; probably brick construction; two or three stories; will construct pier two feet wide and widen creek on both sides.

Tenn., Chattanooga.—J. H. Warner, Commissioner, receives bids until August 31 to erect warehouse at City Wharf; blank forms of proposals, contract and bonds with specifications at office of Adams & Alsop, architects, James Bldg., Chattanooga, or of Commissioner of Public Utilities, Grounds and Buildings.

Tex., Beaumont.—J. G. Sutton, City Secretary, will receive competitive plans and specifications until 10 A. M. September 5 for galvanized-iron warehouse on city wharf; cost, including architect's fees, not to exceed \$10,000. (Previously noted.)

La., Scott.—Bank of Scott awarded contract to V. Herbert, Scott, to erect bank building; 25x35 feet; fireproof construction; cost \$2500. (See "Machinery Wanted.")

S. C., Gaffney.—S. B. Crawley & Co. awarded contract to erect store and office building. (See "Stores.")

Tex., Brenham.—Thos. Schirmacher awarded contract to Alexander Griffin, Brenham, to erect additional story to store building and equip for offices.

Tex., Floydada.—First National Bank awarded contract to C. D. Carlisle, Floydada, to erect bank building; 50x120 feet; cost \$18,000; plans by J. C. Goodwin, Plainview, Tex. (Recently noted.)

Ga., Atlanta.—Park St. Methodist Church, Rev. S. R. Bell, pastor, awarded contract to Miles & Bradt, Austell Bldg., Atlanta, to erect edifice; brick and stone; cost \$45,000. (Recently noted.)

Ky., Louisville.—St. Mark's Episcopal Church, Rev. R. L. McCready, pastor, 108 Birchwood St., has plans by and awarded contract to G. W. Saunders, S. Bayly Ave., Louisville, to erect Sunday-school addition; 80x100 feet; two stories; mill construction; cost \$3000. (Recently noted.)

Mo., St. Louis.—Mt. St. Rose Hospital

CHURCHES

Ga., Atlanta.—Park St. Methodist Church, Rev. S. R. Bell, pastor, awarded contract to Miles & Bradt, Austell Bldg., Atlanta, to erect edifice; brick and stone; cost \$45,000. (Recently noted.)

Ky., Louisville.—St. Mark's Episcopal Church, Rev. R. L. McCready, pastor, 108 Birchwood St., has plans by and awarded contract to G. W. Saunders, S. Bayly Ave., Louisville, to erect Sunday-school addition; 80x100 feet; two stories; mill construction; cost \$3000. (Recently noted.)

Mo., St. Louis.—Mt. St. Rose Hospital

awarded contract to Frein Investment & Building Co., St. Louis, to erect chapel; 32 feet 6 inches by 106 feet; plans by P. S. Kabbitt, St. Louis.

CITY AND COUNTY

Ark., Little Rock.—Engine-house.—City awarded contract at \$5000 to Thomas & Brooks, Little Rock, to erect engine-house at 23d and Arch Sts.; plans by Tom Harding, Little Rock. (Recently noted.)

La., Shreveport.—Pavilions.—City awarded contract at \$11,138 to D. H. Jones, Shreveport, to erect two concrete and brick pavilions and concrete and brick ladies' restroom on Fair Grounds. (Recently noted.)

Tex., Pecos.—Jail.—Reeves County Commissioners awarded contract to George Bruce, Pecos, to erect jail; 44x47 feet; three stories; fireproof; nine cells and other departments. (Previously noted.)

COURTHOUSES

Okl., Hugo.—Choctaw County Commissioners will expend \$107,000 to erect courthouse; 84x110 feet; fireproof construction; direct steam heat; plans by C. E. Hair & Co., Oklahoma City, Okla.; contract recently noted awarded to Donathan & Moore, Wilburton, Okla. (See "Machinery Wanted.")

Tex., Bowie.—Bowie County Commissioners awarded contract for tile and marble work for courthouse at \$8000 to Southwestern Tile & Marble Co. of Little Rock, Ark.

DWELLINGS

D. C., Washington.—P. J. Nee, 743 7th St. N. W., awarded contract to Blakeney & Barnett, Washington, to erect two two-story frame dwellings at 2400 and 2407 37th St. N. W.; cost \$5,000; plans by N. R. Griham, 627 F St. N. W., Washington.

D. C., Washington.—Pumphrey & Palmer awarded contract to G. C. Pumphrey, 311 E St. S. E., Washington, to erect three two-story brick dwellings at 1121-25 Girard St. N. W.; cost \$18,000; plans by W. C. Allard, 707 G St. N. W., Washington.

D. C., Washington.—James B. Lambie, 1415 New York Ave. N. W., awarded contract to C. C. Kimmom, Washington, to erect five two-story brick dwellings at 2132-2140 H St. N. W.; cost \$14,000; plans by John H. Lane, 1725 3d St. N. E., Washington.

Fla., Pensacola.—Rev. John H. Brown awarded contract to A. J. Keynton, Pensacola, to rebuild dwelling recently reported burned; two-story eight-room structure; pebble-dash over frame; cost within \$4500; plans by W. C. Frederic, Pensacola, Fla. (See "Machinery Wanted.")

Ga., Atlanta.—F. A. Pittman awarded contract to Pittman Construction Co., Rhodes Bldg., Atlanta, to erect one-story dwelling at Inman Park; frame; steam heat; electric lighting; cost \$5000; plans by Arthur N. Canton, Rhodes Bldg., Atlanta.

Ga., Atlanta.—F. A. Pittman, Rhodes Bldg., awarded contract to Pittman Construction Co., Rhodes Bldg., Atlanta, to erect dwelling; 33x40 feet; two stories; colonial architecture; frame; steam heat; electric lighting; cost \$10,000; plans by Arthur N. Canton, Rhodes Bldg., Atlanta.

Ga., Atlanta.—W. F. Matthews has plans by and awarded contract to A. Hamilton & Son, 69 Ivy St., Atlanta, to erect dwelling; two stories; seven rooms; frame; cost \$4000.

Ga., Lagrange.—R. O. Pharr of Pharr Bros. & Childs Company awarded contract to Pike Bros. & Co., Lagrange, to erect residence; frame; brick veneered; electric lighting; cost \$11,000; plans by Park A. Dullis, Atlanta, Ga.

Ky., Anchorage.—National Concrete Construction Co., Louisville, has contract to erect proposed May residence; concrete foundation; hollow-tile walls; cost \$25,000.

Ky., Louisville.—National Concrete Construction Co., Louisville, has contract to erect proposed Belknap residence; concrete foundation; hollow-tile walls; cost \$40,000.

Md., Baltimore.—St. Paul's Catholic Church, Rev. M. F. Foley, pastor, Caroline and Oliver Sts., awarded contract to Wm. F. Welsh, 250 W. Preston St., Baltimore, to improve school and rectory. (See "Schools.")

Md., Baltimore.—Joseph L. White, 28 S. Broadway, and S. H. Linthicum, 217-19 St. Paul St., have plans by Charles Broring, 9 N. Potomac St., Baltimore, for eight dwellings on Foster Ave.; two stories; brick; 12x39 feet; cost \$3800; construction by Mr. White.

Md., Baltimore.—John P. Albert, 1702 N. Caroline St., awarded contract to John A. Sheridan, 506 Maryland Telephone Bldg., Baltimore, to erect bungalow on Elsinor

Ave.; one and a half stories; frame; 30x43 feet; cost \$3500.

Md., Baltimore.—E. D. and R. B. Laroque, 2040 E. Pratt St., awarded contract to Joseph Schamberger, 2122 E. Baltimore St., Baltimore, to erect store and dwelling at Garrison and Duval Aves.; three stories; 32x50 feet; tin or slag roof; hot-water heat; cost \$5200; plans by Robert C. Ulrich, Law Bldg., Baltimore. (Previously noted.)

Mo., St. Louis.—Jesse Morris Realty & Investment Co. awarded contract to M. For-nick, 111 N. 7th St., St. Louis, to erect two dwellings; 25x36 feet; cost \$3500 each; plans by E. F. Nolte, Fullerton Bldg., St. Louis. (Recently noted.)

N. C., Winston-Salem.—J. H. Brunt awarded contract to A. H. Walls, Winston-Salem, to erect dwelling; two stories; 10 rooms; frame; electric lighting; cost \$3000.

N. C., Winston-Salem.—J. W. Shipley awarded contract to A. H. Walls, Winston-Salem, to erect residence; two stories; 10 rooms; frame veneer; electric and gas lights; cost \$6500.

N. C., Winston-Salem.—J. W. Shipley will expend \$6500 to erect dwelling; two stories; 10 rooms; brick veneer and rough cast; hot-air heat; gas and electric lighting; plans by W. C. Northrup, Winston-Salem; contract recently noted awarded to A. H. Walls, Winston-Salem.

S. C., Bishopville.—Wm. M. Reid awarded contract to W. M. Padgett, Bishopville, to erect dwelling recently noted; 53.5x40 feet; two stories; ordinary construction; slate roof; grates; electric lighting; plans by J. H. Johnson, Sumter, S. C.; cost \$4500.

S. C., Greenville.—Dr. A. B. Wardlaw awarded contract to erect residence; two stories.

Tenn., Chattanooga.—J. C. Howell will erect residence; two stories and basement; 40x66 feet; vitrified brick; 13-inch wall; copper gutters; plate glass; install pneumatic cleaning apparatus; hot-water heat; electric lighting; cost \$12,000; plans by Barnwell & Jones, Chattanooga; contract awarded to Adams & Schneider, Chattanooga.

Tenn., Memphis.—W. C. Booth awarded contract to erect residence; cost \$3500.

Tex., Hearne.—S. Lipshitz awarded contract to E. J. Morris, Hearne, to erect residence. (Recently noted.)

Tex., San Marcos.—W. D. Hofheinz awarded contract to erect residence; two stories; cost \$4000.

GOVERNMENT AND STATE

Ky., Ironton.—Federal Building.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., awarded contract to Mr. Henry of Catlettsburg, Ky., to erect proposed Federal building.

N. C., Greensboro.—Federal Building.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., awarded contract to E. D. Golden, Greensboro, for improvements to Federal building.

S. C., Columbia.—Asylum.—State Asylum Commission awarded contract to P. J. O. Smith, Spartanburg, S. C., to erect asylum buildings; cost \$100,000 each. (Previously noted.)

Tex., Galveston.—Quarantine Station.—Treasury Department awarded contract at \$86,000 to C. L. Ryals, Galveston, to erect United States quarantine buildings; executive building, one story, 10 rooms; assistants' quarters, one story, 51x38 feet; medical officers' quarters, one story, 52x60 feet; attendants' quarters, one story, 36x20 feet; barracks, 100x36 feet; hospital building, 51x38 feet; disinfectant-house, 36x80 feet; oil-house; storm-refuge house, with base 28 feet square. (Previously more fully detailed.)

HOTELS

Mo., St. Louis.—Mrs. Anna M. H. O'Fallon awarded contract to Kremer & Voirol Construction Co., St. Louis, to remodel and enlarge Olive St. Hotel to cover lot 50x109 feet; four stories; lower floor for seven stories; upper floors for hotel, with 50 guestrooms, private baths, hot and cold water; electric lights; telephones; elevators; plans by Wm. J. Beattie, St. Louis.

MISCELLANEOUS

Ky., Maysville.—Maysville Street Railway & Transfer Co. awarded contract for erection of car barn; 100x65 feet; concrete; fireproof; one and two stories; saw-tooth roof with skylights; first floor equipped with five tracks, pit, waiting and work rooms, etc.; upper floor for motormen's quarters; cost \$10,000. (Previously noted.)

Mo., Kansas City.—Sheds.—Dierck & Sons

awarded contract to Lonsdale Bros., Kansas City, to erect lumber sheds; cost \$25,000.

Mo., St. Louis.—Chapel.—Mt. St. Rose Hospital awarded contract to Frein Investment & Building Co., St. Louis, to erect chapel. (See "Churches.")

W. Va., Fairmont.—Barn.—Fairmont & Clarksburg Traction Co. will expend \$10,000 to erect car barn; 54x177 feet; fireproof construction; electric lighting; contract recently noted awarded to John M. Kisner & Bro., Fairmont; steel frame contract let separately.

RAILWAY STATIONS

La., Shreveport.—Kansas City Southern Railway and Shreveport & Gulf Terminal Co. awarded contract to Garson Bros., 116 Majestic Bldg., Shreveport, to make improvements to Union Station; cost \$3200. (Recently noted.)

W. Va., Huntington.—Chesapeake & Ohio Railway, F. I. Cabell, chief engineer, Richmond, Va., awarded contract to Taylor & Robinson, Huntington, to erect proposed depot.

SCHOOLS

Ark., Magnolia.—Board of trustees, Third Agricultural District, awarded contract to Guy Wilson, Magnolia, to erect temporary building for boys' dormitory; ordinary construction; cost \$2500. (Recently noted.)

Ga., Atlanta.—City awarded contract to Mackee-Crawford Construction Co., Atlanta, to erect two eight-room brick schools; steam blast system of heating; cost \$33,500 each; plans by E. E. Dougherty, Candler Bldg., Atlanta. (Previously noted.)

Ky., Lexington.—Board of Education awarded contract at \$33,689 to Congleton Lumber Co., Lexington, to erect West End school building; ordinary construction; fan-blast system of heating; will award electric wiring and heating contracts later; plans by Garber & Woodward, 906 Andrews Bldg., Cincinnati, O. (Recently noted.)

Ky., Louisville.—Board of Education awarded contracts to National Concrete Construction Co., Louisville, to erect Bland St. School, install concrete floors throughout Girls' High School building and for concrete work on annex to this institution. (Previously noted.)

La., New Orleans.—Ursuline Sisters awarded contract to George Glover, New Orleans, to erect convent, including main building, residence for priests, laundry, etc.; main structure 450x300 feet; courtyard 20 feet square; old English Gothic style; gray pressed brick; stone and terra-cotta trimmings; three stories; fireproof; tall walls cut by arched windows; plans by Andry & Bendoragie, New Orleans. (Recently noted.)

Md., Baltimore.—St. Paul's Catholic Church, Rev. M. F. Foley, pastor, will expend \$6000 in alterations and additions to rectory and school; ordinary construction; steam heat; electric lighting; plans by John K. Stack, 12 E. Lexington St., Baltimore; awarded contract to W. F. Welch, 250 W. Preston St., Baltimore. (Recently noted.)

Md., Baltimore.—Johns Hopkins University awarded contract to Lord & Burnham, St. James Bldg., New York, to erect greenhouse at Homewood; brick construction; plans by Parker, Thomas & Rice, Union Trust Bldg., Baltimore. (Previously noted.)

Miss., Hattiesburg.—Trustees of State Normal College awarded contract at \$178,591 to I. C. Garber, Jackson, Miss., to erect main building, dormitories for men and women, students' college and president's home; fireproof; faced brick; stone trimmings; porch floors of reinforced concrete covered red tile; slate roof; copper gutters; plans by R. H. Hunt, Chattanooga, Tenn. (Recently noted.)

S. C., Anderson.—Anderson College, Louis Bristow, secretary board of trustees, awarded contract to Wise Granite Co., Wise, N. C., at \$74,000 to erect administration building and two dormitories; plans by Shand & Lafaye, Columbia, S. C., and J. H. Casey, Anderson; contracts for heating, plumbing, seating and furnishing will be let later. (Previously noted.)

S. C., North Augusta.—City awarded contract to erect proposed high-school building; two stories; nine classrooms, gymnasium, industrial department, etc.; cost \$10,000.

Tenn., Nashville.—State Board of Education awarded contracts to erect Agricultural Industrial Normal School for Negroes; cost about \$100,000; J. W. Brister, State Superintendent. (Recently noted.)

Tenn., New Providence.—Tennessee Independent Order of Odd Fellows will expend \$20,000 to erect boys' dormitory, school building, gymnasium and auditorium; two stories; 50x80 feet; brick; stone founda-

tion; hot-water heat; electric lighting; plans by John Gaisford, 408 Goodwyn Institute, Memphis, Tenn.; contract (recently noted at Clarksville, Tenn., under "Association and Fraternal Buildings") awarded to F. L. Smith Sons' Company, Clarksville, Tenn. (See "Machinery Wanted.")

Tenn., Sewanee.—University of South awarded contract to George Moore & Sons, 527 S. Eighth Ave., Nashville, Tenn., to erect proposed hospital; 45x101 feet; fireproof construction; steam heat; electric lighting; hand-power elevator; cost \$20,000; plans by C. K. Colley, 33 Life Casualty Bldg., Nashville, Tenn.

Tex., Savoy.—City awarded contract to erect proposed school; cost about \$700. Address The Mayor.

Tex., Steep Hollow (not a postoffice).—A. S. Bullock of Bryan, Tex., has contract to erect addition to school.

Va., Harlowes (not a postoffice).—Campbell County Board of Education, Rustburg, Va., awarded contract to erect school. (Recently noted.)

Va., Winfall (not a postoffice).—Campbell County Board of Education, Rustburg, Va., awarded contract to erect school. (Recently noted.)

STORES

Ala., Prattville.—W. G. Robertson & Co. awarded contract to erect store building; brick construction.

Fla., Jacksonville.—O. L. Wadsworth, Box 321, awarded contract to Seaton & Seaton, Jacksonville, to erect 105x60-foot two-story store building recently mentioned; ordinary construction; plans by J. Potts, Jacksonville.

Fla., Tampa.—Robert Mugge awarded contract to Parker Engineering & Construction Co., Tampa, to erect store and storage building. (See "Warehouses.")

Ga., Atlanta.—Goldsmith & Stuart awarded contract to George A. Clayton, Atlanta, to erect business building; one story; brick; cost \$19,000.

Ky., Louisville.—Banner Building Co. awarded contract to F. Selbert, 820 Vine St., Louisville, to erect business building; 48x175 feet; ordinary construction; cost \$29,000; plans by Emil Korell, Louisville. (Previously noted.)

Md., Baltimore.—I. J. Braun, Baltimore and Gay Sts., awarded contract to J. F. Farley & Son, 43 Franklin Bldg., Baltimore, to erect addition to building at 426-28-30 E. Baltimore St.; three stories; marble front.

Md., Baltimore.—E. D. and R. B. Laroque awarded contract to Jos. Schamberger, 2122 E. Baltimore St., Baltimore, to erect store and dwelling. (See "Dwellings.")

Mo., St. Louis.—Mrs. Anna M. H. O'Fallon awarded contract to Kremer & Voirol Construction Co., St. Louis, to remodel Olive St. Hotel for hotel and stores. (See "Hotels.")

N. C., Mount Holly.—Mrs. Minnie M. Lentz awarded contract to Dunn, Thompson & Clemmer, Mt. Holly, to erect store building; red brick; granite trimmings; plate-glass front; metal ceiling; plans by Louis H. Asbury, Charlotte, N. C.

Okl., Boswell.—R. F. Self awarded contract to erect business building; two stories; brick.

Okl., Boswell.—A. M. Irby awarded contract to erect business building; brick construction.

S. C., Gaffney.—S. B. Crawley & Co. awarded contract to erect building; two stories; brick; lower floor for stores; upper floor for offices.

Tex., Floydada.—First National Bank awarded contract to erect store and bank building; cost \$18,000. (See "Bank & Office Buildings.")

Tex., Marlin.—F. S. Heffner awarded contract to J. Phipps, Marlin, to erect two buildings; one story; brick; 24x80 feet; cost \$4900.

THEATERS

Tex., Mexio.—Citizens' Opera-House Co. W. L. Murphy, president, has plans by and awarded contract to J. F. Denning to remodel opera-house; 58x115 feet; ordinary construction; electric lighting; cost \$12,500. (Recently noted.)

WAREHOUSES

Fla., Tampa.—Robert Mugge has plans by and awarded contract at \$72,985 to Parker Engineering & Construction Co., 213 Curry Bldg., Tampa, to erect store and storage building; 68x194 feet; fireproof; front veneered with hydraulic pressed brick; each floor except first to have windows fitted with steel sashes; foundation 20 feet below street level and of solid rock or cement grillage; six eight-inch standpipes for water; three

elevators, to cost \$12,000; materials required in part are: 400 tons of steel, 4000 cubic yards of gravel, 55,000 barrels of cement, 2000 cubic yards of sand, 2000 feet of lumber for forms, not to remain in building; will set on stout piers imbedded in either solid rock or grillage. (Recently noted.)

Md., Baltimore.—Baltimore & Ohio Railroad, F. L. Stuart, chief engineer, awarded contract to Baltimore Bridge Co., Baltimore, to erect warehouse on Henderson's wharf;

230 feet by 34 feet 9 inches; superstructure of steel. (Recently noted.)

Tenn., Knoxville.—Hazen-Lotspiech Company awarded contract to J. M. Dunn & Son, Knoxville, to repair damages to warehouse; 25x125 feet; ordinary construction; cost \$4500. (Recently noted under "Stores.")

Tex., Mexia.—Citizens' Opera-House Co., awarded contract to John Preplan, Rayne, La., to erect warehouse; 66x200 feet; ordinary construction; cost \$3500; plans by J. Gould, Rayne, La. (Recently noted.)

F. S. Pearson and others are reported interested.

Va., Roanoke.—R. H. Angell, a director of the Roanoke & Mt. Airy Railroad Co., is quoted saying that survey is complete and that estimates are being made to build the line, which will be 90 miles long from Roanoke, Va., to Mt. Airy, N. C.

W. Va., Charleston.—A contract for a three-mile branch from the Cabin Creek extension of the Chesapeake & Ohio Railway is reported let to B. V. Boxley & Co. to open up coal lands of the Marsh Creek Splint & Gas Coal Co., of which T. E. B. Siler of Charleston is president.

W. Va., Sistersville.—A dispatch says that construction has begun on the Tyler Traction Co.'s electric railway from Sistersville to Middlebourne, W. Va.

W. Va., Morgantown.—The Mount Morris & Morgantown Railway Co. is reported to have secured most of its rights of way and will soon let contracts for construction between Mount Morris, Madsville and Randall. Aaron Garlow of Morgantown, W. Va., is president; J. W. Rogers, treasurer, and W. I. Pomeroy, secretary, both at Mount Morris, Pa.

STREET RAILWAYS

Ala., Birmingham.—Contract is reported let to Howard N. Bowdry for an extension of

the Edgewood street car line to the Edgewood Country Club, about one mile.

Ark., Fayetteville.—A dispatch says that W. A. Fraser and others of Dallas, Tex., who purchased East Mountain, have been granted a 50-year street-railway franchise.

Ga., Savannah.—The Savannah Electric Co. proposes to build some additional track.

Ky., Louisville.—The Louisville Railway Co. is reported to have made surveys for a line between Orell and Kosmodale. T. J. Minary is president and general manager.

Ky., Owensboro.—The Owensboro City Railway, it is reported, will spend several thousands of dollars for improvements. John G. Delker is president.

Tex., Corpus Christi.—The Corpus Christi Street & Interurban Railway is reported to contemplate an extension to Ingleside.

Tex., Denton.—The Denton Street Railway Co. is reported to have completed its extension to the College of Industrial Arts, one and a half miles.

Tex., Greenville.—The Mineral Heights Traction Co. is reported to have completed its line from Greenville to Mineral Heights, three miles.

Tex., Temple.—Construction is reported begun on the extension of the Southwestern Traction Co. in South Temple.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Birmingham.—The Birmingham, Ensley & Bessemer Railway Co., which is building the electric railway from East Lake through Birmingham to Bessemer, is reported to have elected officers thus: President, J. H. Morris of Philadelphia; vice-president, J. M. Dewberry of Birmingham; secretary, P. S. Briggs of Philadelphia.

Ala., Fort Davis.—A dispatch says that construction has begun on the extension of the Birmingham & Southeastern Railway (formerly the Union Springs & Northern) from Fort Davis towards Tallahassee, and it will finally be continued north to Birmingham and south from Union Springs to St. Andrews Bay. W. M. Blount, Union Springs, Ala., is president.

Ark., Pine Bluff.—Secretary W. E. E. Koepfer of the Pine Bluff Board of Trade, writes that an organization has not yet been effected for the proposed north and south railroad via Pine Bluff, but as soon as definite information can be given it will be made public.

Ark., Ashdown.—The Memphis, Dallas & Gulf Railroad Co., which is reported to have bought the Caddo & Choctaw and the Hot Springs & Western railroads, will, according to a dispatch, build a short extension from Ashdown to Hot Springs, Ark. A. M. Van Anken is chief engineer at Nashville, Ark. It is further reported that arrangements will soon be made for the contemplated extension to Dallas, Tex.

Fla., Mulberry.—The Seaboard Air Line, it is reported, has begun construction of an extension from Mulberry to Bartow, eight miles.

Fla., Palatka.—President J. R. Parrott of the Florida East Coast Railway, referring to the report that it is contemplated to build from San Mateo to Orange City, says the company has no intention of this kind at present.

Fla., Tampa.—The Atlantic, Okeechobee & Gulf Railroad Co., says a report, has accepted the franchise granted in Tampa, and President H. C. Ferriol is quoted as saying that construction is now assured. Preliminary work in the field will begin within three weeks. R. L. Riley is first vice-president and Hiram McElroy chief engineer; offices in the Franklin Bldg., Tampa.

Ga., Brooklet.—President J. N. Shearouse of the Shearwood Railroad Co. confirms the report that an extension is contemplated.

Ga., Hawkinsville.—President T. B. Ragan of the Hawkinsville & Western Railroad is quoted saying that it is expected the line will be completed to Brown Dale by October 15. Tracklaying will begin September 1.

Ga., Dahlonega.—H. D. Gurley, one of the incorporators of the Etowah Valley Railway Co., confirms report that application has been made for charter to build an electric line from a point on the Louisville & Nashville Railroad at or near Ball Ground along the Etowah River through Creighton, Ga., to a point on the northern boundary of the State in Towns county, about 75 miles; capital stock, \$50,000. Among others interested are G. R. Glenn, John H. Moore, T. J. Smith, J. M. Brooksher, J. E. Tate, H. Head, J. F. Sargent, W. H. Jones, B. F. Anderson, W. B. Townsend and Craig R. Arnold, all of Dahlonega, Ga.

Ga., Springfield.—President George M. Brinson of the Brinson Railway confirms report of the completion of line to Waynesboro, Ga., and says that work will be pushed on from there.

Ky., Louisa.—W. F. Hite of Huntington, W. Va., and J. C. C. Mayo of Paintsville, Ky., are reported interested in a plan to build a railroad from the mouth of Beaver Creek to coal lands, 25 miles, and rights of way are being obtained.

Ky., Hickman.—E. F. Wheaton of Nashville, Tenn., and Henderson, Ky., is reported saying that capital has been secured for the Kentucky Southwestern Railway & Power Co., which proposes to build a line connecting Henderson, Paducah, Hickman and Mayfield, Ky., besides other points.

La., New Iberia.—A dispatch says that con-

struction has begun on the Iberia, St. Mary & Eastern Railway, which will run from New Iberia to Jeanerette, Franklin, Patterson, Charenton, Irish Bend, Centerville and Berwick, about 50 miles.

La., New Orleans.—The Louisiana Southern Railway, now leased by the Frisco system, will, it is announced, relay its tracks with 65-pound rails, having received 3000 tons out of a total order of 4000 tons. An extension from Belair to Bohemia, La., 20 miles, is also planned.

Md., Hagerstown.—It is understood that the Cumberland Valley Railroad Co. will soon ask for bids on from 400,000 to 500,000 cubic yards of grading in connection with grade revision of line through Chambersburg. George C. Koons is engineer at Chambersburg, Pa.

Miss., Yazoo City.—Secretary E. L. Tarry of the Yazoo Commercial Club, writes that rights of way have been secured for about half the distance for the proposed traction line from Yazoo City to Canton, Miss., about 27 miles. The matter is now in shape to incorporate.

Miss., Meridian.—Charter is reported asked for the Meridian & Memphis Railway Co. to build a line to connect the two cities named; incorporators, S. A. Neville, C. F. Scofield and W. C. Stowell of Meridian, Miss. It is said to be part of the plan to build the Meridian & Deep Water Railway in the opposite direction from Meridian.

N. C., Fayetteville.—A dispatch says that the Aberdeen & Rockfish Railroad Co. contemplates building an extension from Tree Fall to Fayetteville, 10 miles. John Blue is president and general manager at Aberdeen, N. C.

Okla., Shawnee.—The Shawnee Electric Railway Co., says a telegram, has filed mortgage to secure \$1,000,000 of bonds for its proposed line from Shawnee to Oklahoma City, about 40 miles. O. T. Edwards is president and A. Hargrave secretary.

Tenn., Nashville.—A dispatch from Gallatin says that construction has begun by Carmichael & Spradlin, contractors, for the Nashville & Galatin Interurban Railway. H. H. Mayberry, Nashville, Tenn., is president.

Tex., Crystal City.—Concerning the report that it is contemplated to extend the Crystal City & Uvalde Railroad to Aransas Pass, A. R. Ponder, vice-president and general manager, says that there is nothing definite about any extension east of Fowlerton.

Tex., Denison.—The Missouri, Kansas & Texas Railway, says a dispatch, has awarded a contract to Patton & Gibson for grading at the Ray yards, west of Denison, for additional trackage for 700 cars. A. M. Acheson is chief engineer at Dallas, Tex.

Tex., Jefferson.—The Jefferson & Northwestern Railway Co., says a report from Austin, Tex., has amended a charter to increase its capital from \$30,000 to \$50,000, and there may be some new construction. Address Jefferson, Tex.

Tex., Eagle Pass.—T. H. Holson, according to a report from Roma, Tex., represents a syndicate which proposes to build a railway from Eagle Pass to San Fordyce via Laredo, Roma and Rio Grande City.

Tex., Marshall.—The Marshall & East Texas Railway, according to a dispatch, will issue \$5,000,000 of 5 per cent. bonds, and it is reported that an extension is to be built, possibly to Paris, Tex. J. E. Volav is vice-president and general manager at Marshall, Tex.

Tex., Mertzon.—The Kansas City, Mexico & Orient Railway, according to a report quoting an official, has secured \$3,000,000 of foreign capital for the construction of its line from Mertzon, Tex., to Presidio del Norte to complete the through line. W. W. Colpitts is chief engineer at Kansas City, Mo.

Tex., San Antonio.—The Railroad from Dunlay, on the Southern Pacific Railway, to the Medina River dam, which is being built by the Medina Irrigating Co., is reported complete and will be operated immediately.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Air Compressors.—Pennsylvania Glass Co., Anderson, Ind., wants air compressors.

Air Compressor.—B. Kiel, superintendent light and water plant, Cullman, Ala., invites bids on air compressor.

Air Compressor, Air Receiver, etc.—Office of Superintendent of Prisons, Department of Justice, Washington, D. C. Sealed proposals received in this office until 10 A. M. September 18, then publicly opened, for air compressor, air receiver, riveting hammers and hose for United States penitentiary, Leavenworth, Kans., in accordance with specifications, copies of which, with information, may be had upon application at this office; R. V. La Dow, Superintendent of Prisons.

Automobiles.—I. J. Mallonee, care of Mallonee Engineering Co., Box 305, Savannah, Ga., wants to correspond with manufacturers of automobiles, with view to representation; moderate-priced cars preferred.

Apple Products.—Louisiana Export & Stave Co., 307 Camp St., New Orleans, La., wants "prime bleached waste" and "chopped apples."

Bank Fixtures, etc.—Staunton National Bank, Staunton, Va., will want prices on vault and other bank equipment. Address B. E. Vaughan, president.

Barrels.—Louisiana Export & Stave Co., 307 Camp St., New Orleans, La., wants to correspond with barrel manufacturers; wants wine barrels of 50 to 53, 28 to 30, 12 to 14 and 6 to 7 gallons capacity.

Beltting.—See "Machine Tools, etc."

Beltting.—See "Woodworking Machinery."

Blacksmith Tools.—See "Mining Machinery."

Boats.—See "Electrical Machinery, Locomotives, etc."

Boiler.—A. A. Northern, care of Ashland Oil Mill & Fertilizer Co., Ashland, Ala., wants second-hand 175-horse-power boiler, with feed-water heater, boiler-feed pump and all fixtures. (See "Mining Machinery.")

Boilers.—See "Water-works."

Boilers.—See "Machine Tools, etc."

Bottling Machinery.—Louis H. Stoneman, Columbia, Va., wants prices on soda water bottling outfit.

Bridge.—City of Vicksburg, Miss., invites bids until September 23 for repairing brick arch, constructing reinforced concrete extensions, etc., to brick arch over Glass Bayou; plans and specifications in offices of Chancery Clerk and City Engineer. (See "Machinery Wanted.")

Bridge.—J. W. Munson, judge of Brazoria county, Angleton, Tex., receives proposals until September 11 to construct wooden

bridge with draw, near Liverpool, Tex.; for plans and specifications apply to M. L. Drake, County Commissioner, Alvin, Tex.

Bridge, etc.—Charles County Supervisors, J. M. La Roche, chairman, Charles-ton, S. C., receives bids until September 6 to construct causeway, equip ferry, construct landing slips, construct bridge, etc.; plans and specifications on view.

Bridge Construction.—Commissioners' Court, Brazos county, receives sealed bids until noon September 11 at office of J. W. Munson, County Judge, Angleton, Tex., for furnishing material and labor for construction of two bridges over Brazos River at Columbia and at Brazoria in accordance with plans and specifications on file at office of County Judge; bids to be opened on same date; contractors to submit bids for each bridge separately and for both together; certified check for \$3000; contractors requested to visit locations; duplicate plans, etc., may be secured from F. S. Rice, engineer, Sweeney, Tex.; rights reserved.

Bridge Construction.—Nicholas County Commissioners receive bids until noon September 11 at Summersville, W. Va., for construction of steel bridge across Cherry River at Fenwick; substructure of stone or concrete; 135 feet long and 14 feet wide; plans and specifications in office of P. N. Wiseman, Clerk of County Court.

Bridges.—P. St. J. Wilson, State Highway Commissioner, Richmond, Va., receives bids until 12 M. September 6 to construct 144-foot steel span across Little Reed Island in Carroll county, Virginia; plans and specifications at office of County Clerk, Hillsville, Va.

Bridges.—P. St. J. Wilson, State Highway Commissioner, Richmond, Va., receives bids until 12 M. September 6 to construct two steel bridges across Rack Island and Bent Creek in Appomattox county, Virginia; plans and specifications at office of County Clerk, Appomattox.

Bridges.—Henderson County Commissioners, Hendersonville, N. C., will receive bids October 2 to construct two steel bridges over French Broad River. Address S. M. King.

Broom Machinery.—C. M. Hudson, Box 12, Glamorgan, Va., wants to correspond with manufacturers of broom machinery.

Buckles.—See "Compress Supplies."

Building Materials.—H. M. Johnson, Gadsden, Ala., wants prices on columns, laths and shingles.

Building Materials.—Harvill & Ferguson, 915 Empire Bldg., Atlanta, Ga., want prices on building materials.

Building Materials.—Farmers' Storage & Fertilizer Co., Aiken, S. C., wants brick, lime and cement.

Building Material.—Donathan & Moore, Wilburton, Okla., want prices on ornamental iron work, marble and tile.

Canning Machinery.—Lee Pickett, Carabelle, Fla., wants addresses of manufacturers of and dealers in canning machinery.

Casks.—See "Barrels."

Cement.—Office of Superintendent of Prisons, Department of Justice, Washington, D. C. Sealed proposals received in this office until 10 A. M. September 11, and then opened, for Portland cement, to be delivered f. o. b. cars at United States penitentiary, Leavenworth, Kans., in accordance with specifications, copies of which, together with further information, may be had upon application at this office. R. V. La Dow, Superintendent of Prisons.

Cement-block Machinery.—See "Electrical Machinery, Locomotives, etc."

Channeling Machinery.—Georgia Green State Co., 1913 Candler Bldg., Atlanta, Ga., wants channeling machinery.

Compress Supplies.—Piedmont Bonded Warehouse & Compress Co., Greenville, S. C., wants trucks, rivets, buckles, twine, etc.

Comfort Machinery.—B. T. Jones, Enfield, N. C., wants to correspond with manufacturers of machinery for making comforts.

Concrete Mixer.—See "Paving Equipment."

Cooling Equipment.—Buffalo Park Sanitarium Corporation, Pawnee, Okla., wants information and prices on apparatus for reducing temperature of building.

Copper Conductors, Bars, etc.—Proposals received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. September 23, and then opened, for furnishing copper conductor bars and splice bars. Blanks and information relating to this circular (No. 647) obtainable from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engineer Offices in the following cities: Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile, Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, and Chamber of Commerce and Board of Trade, Tacoma. F. C. Rogers, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Copper Rivets.—See "Hardware."

Crematory.—City of Wilmington, N. C., wants quotations on crematory for population of 26,000; Joseph D. Smith, Mayor.

Cotton-hull Fiber.—Columbia Fiber Co., Bloomsburg, Pa., wants addresses of manufacturers of delint stock (or cotton-hull fiber).

Crane Track.—Sealed proposals, endorsed "Proposals for Renewal of 40-ton Locomotive Crane Track," received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 o'clock A. M. September 30 for renewal of 40-ton locomotive crane track at navy-yard, Norfolk, Va.; plans and specifications obtained on application to bureau or to commandant of navy-yard named; specification No. 1795; Wm. M. Smith, acting chief of bureau.

Crusher.—A. A. Northern, care of Ashland Oil Mill & Fertilizer Co., Ashland, Ala., wants second-hand jaw crusher; capacity 12 tons per hour. (See "Mining Machinery.")

Dam Construction.—Red River County Club, L. W. Groves, treasurer, Clarksville, Tex., invites bids until September 11 for constructing earth dam; about 50,000 cubic yards earth; plans, specifications, etc., on file.

Dies.—See "Stamping Machinery."

Drill Press.—See "Mining Machinery."

Dredging.—U. S. Engineer Office, 17th St. N. W., Washington, D. C. Sealed proposals for dredging in upper Machodoc Creek, Virginia, received here until 12 M. September 27, then publicly opened. Information on application. W. C. Langfitt, Lieutenant-Colonel, Engineers.

Dredging.—Sealed proposals received by Florida Coast Line Canal & Transportation Co. at office in St. Augustine, Fla., until 12 noon September 20, and then and there publicly opened and read, for completion of canal from Matanzas Inlet to Halifax River, Florida, about 20 miles; approximately 1,200,000 cubic yards earth excavation; contractor to furnish all plant required to excavate canal 50 feet wide at bottom and 5 feet deep at low water, and dispose of material excavated, which can be placed on bank on either side if desired; plans and specifications at office of company at St. Augustine

and at Room 29, 19 Pearl St., Boston, Mass.; certified check for \$2000; rights reserved; George F. Miles, vice-president; A. H. Sawyer, treasurer.

Dredging.—U. S. Engineer Office, W. C. Langfitt, Lieutenant-Colonel, Engineers, 930 17th St., Washington, D. C., receives proposals until September 17 for dredging in James River, Virginia; information on application.

Drop Forges.—See "Machine Tools, etc."

Ebonite.—See "Electrical Machinery Materials."

Electrical Machinery.—Farmers' Storage & Fertilizer Co., Aiken, S. C., wants electric motors.

Electrical Machinery.—Board of Bond Trustees, South Jacksonville, Fla., invites bids until September 4 for installing electric-lighting machinery and furnishing and installing electric transmission system; specifications obtainable at office of William W. Lyon, consulting engineer, 305 Duval Bldg., Jacksonville, Fla.

Electrical Machinery.—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa., wants second-hand generator set, 300 to 400 kilowatts, 250 volts, D. C., direct connected to engine; modern and compact for limited floor space.

Electrical Machinery, Locomotives, etc.—Benedict Vienna, Sinal, C. E., Apartment 43, 107 W. 109th St., New York, wants to correspond with manufacturers or dealers in (with view to representation in Brazil) electric motors, generators, transformers and engines for electric service, electrical supplies, railway locomotives, boilers and engines of all kinds, structural steel for bridges and buildings, metal windows and doors, iron, steel and prepared roofing, Browning cranes, steel drags, buckets, excavators, gasoline motor boats, tugs, shallow river steamers, cement and rubber roofing, stone-cutting machines and cement and clay block machinery.

Electrical Machinery.—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa., wants 300-kilowatt generator, 250 volts, direct current, with steam turbine; steam pressure 150 pounds, 26 to 28 inch vacuum; second-hand. Sate steam consumption per kilowatt hour.

Electrical Machinery Materials.—Monti & Martini, Via Orlandi 7, Milan, Italy, want to correspond with American manufacturers of mica, gum, ebonite, porcelain, fiber, etc., for electrical apparatus.

Electrical Machinery.—Fay Machinery Co., 126 Liberty St., New York, wants one 30-kilowatt and one 50-kilowatt direct-connected 220-volt electric-light units.

Electric-light Fixtures.—O. C. Griner, Tifton, Ga., wants prices on electric-light fixtures.

Electric-light Plant.—See "Water-works and Electric-light Plant."

Electric-light Plant.—See "Water-works and Electric-light Plant."

Engine.—See "Machine Tools, etc."

Engine.—See "Mill Equipment."

Engine.—A. A. Northern, care of Ashland Oil Mill & Fertilizer Co., Ashland, Ala., wants second-hand 150-horse-power Corliss engine. (See "Mining Machinery.")

Engines and Boilers.—See "Electrical Machinery, Locomotives, etc."

Ferrules, Caps, etc.—Texas Handle Co., Houston, Tex., wants addresses of manufacturers of plain and strap ferrules and caps; for hay and spading fork handles, scoop shovels, etc.; also wants malleable iron D's for forks and shovels.

Fertilizer Material.—Farmers' Storage & Fertilizer Co., Aiken, S. C., wants fertilizer material.

Fertilizer Machinery.—Trenton Fertilizer Co., J. B. Knight, president, Trenton, S. C., wants catalogues and prices on machinery for dry-mixing plant.

Fiber.—See "Electrical Machinery Materials."

Fireplaces.—O. C. Griner, Tifton, Ga., wants prices on five brick and tile fireplaces.

Filtration Plant.—Sealed bids received by C. E. Ward, chairman of Water Committee, Fairfield, Ia., until 7 P. M. September 25 for gravity filtration plant, to consist of building, filter tanks, coagulation tanks, settling tanks, pumps, blower, washing devices, pipe fittings, etc.; plant to treat 1,000,000 gallons per 24 hours; certified check for \$1000; rights reserved; particulars and specifications furnished on application to Hall & Adams, engineers, Centerville, Ia.

Filtration Plant.—Proposals received by Mayor and City Council, Muskogee, Okla., until Tuesday, September 5, at 10 A. M., and

then opened, for construction of 6,000,000-gallon water purifying and softening plant; bids received at present time for concrete basins only; certified check for 10 per cent. of amount of bid; plans and specifications secured at office of City Engineer and at office of consulting engineer, 114 Liberty St., New York; usual rights reserved; T. P. Clonts, City Engineer; Alexander Potter, consulting engineer.

Foundrymen and Machinists.—No. 82, care of Manufacturers Record, Baltimore, Md., wants to correspond with view to placing foundry and machine shop work.

Glass Jars.—Mrs. Arthur Guilbeau, Breau Bridge, La., wants to purchase small-sized jars, pickle bottles, jelly glasses, etc.

Grading.—Cumberland Valley Railroad Co., Chambersburg, Pa., will probably want bids at early date on 400,000 to 500,000 cubic yards grading.

Grinding Mill.—C. W. Alexander & Co., Nashville, Tenn., wants prices f. o. b. Nashville on attrition mill to grind cedar sawdust to fine product; eight-inch plate; belt-driven mill, to rest on stand with hopper.

Gum.—See "Electrical Machinery Materials."

Hardware.—Webb Fly Screen Manufacturing Co., 3 Little Sharp St., Baltimore, Md., wants prices on hardware for fly screens.

Hardware.—Dawson Motor Boat Co., K and Water Sts. S. W., Washington, D. C., wants brass screws; also copper rivets and bars.

Hardware.—See "Ferrules, Caps, etc."

Heating Plant.—F. L. Smith Sons Company, Clarksville, Tenn., wants prices on hot-water heating plant.

Hose.—See "Air Compressor, Air Receiver, etc."

Ice Machinery.—F. A. Gennett Company, proprietor Barnesville Fuel & Ice Co., Barnesville, Ga., wants quotations on 10 or 12-ton ice plant, with information on same.

Ice Machinery.—See "Cooling Equipment."

Ice Machinery.—D. S. Jones, 100 E. Brambleton Ave., Norfolk, Va., wants prices on complete ice plant of 10 tons daily capacity.

Implement Manufacturers.—J. R. Hardy, Wilson, N. C., wants to correspond with manufacturers (not farther north than Baltimore, Md.) of farming implements relative to manufacturing combined stalk cutter and cart on royalty basis.

Iron Work.—Louis H. Stoneman, Columbia, Va., wants prices on iron store fronts.

Jar-cap Machinery.—Pennsylvania Glass Co., Anderson, Ind., wants set of (Mason) fruit-jar cap machinery.

Laundry Machinery.—C. M. Hudson, Box 12, Glamorgan, Va., wants to correspond with manufacturers of laundry machinery.

Laundry Machinery.—D. E. McLeod, Waycross, Ga., wants second-hand power ironing machine; medium-size mangle.

Laundry Machinery.—Dr. M. M. Malcolm, Fayetteville, W. Va., wants prices on second-hand laundry equipment.

Levee Construction.—Board of State Engineers, New Orleans Court Bldg., New Orleans, La., receives bids until 1 P. M. September 4 for constructing following levee work on Mississippi River: Biggs levee, Madison parish, raising and enlarging, 9,000 cubic yards; deposit required \$300; Reid levee, Madison parish, raising and enlarging, 75 cubic yards; deposit \$200; usual rights reserved; blank forms of proposals obtainable on application to Board of State Engineers or to N. H. Lewis, Tallulah, La.

Levee Construction.—Board of State Engineers, New Orleans Court Bldg., New Orleans, La., will receive bids until 1 P. M. for following levee work: Kempe levee, Tensas parish, right bank of Mississippi River, 60,000 cubic yards; Carolina levee, Bossier parish, Red River, 75,000; deposits required, \$300 and \$200; usual rights reserved; blank forms of proposals may be had upon application to Board of State Engineers at New Orleans; Frank M. Kerr, Chief State Engineer.

Lumber.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will receive bids until September 12 for furnishing 32,500 feet of prime Georgia pine, schedule 3881; delivery Navy-yard, Washington, D. C.; for copies apply navy pay office nearest Navy-yard.

Lumber.—Dawson Motor Boat Co., K and Water Sts. S. W., Washington, D. C., wants boat-building lumber, including white oak, white cedar, mahogany and spruce; long lengths; all thicknesses.

Lumber.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will receive bids until September 12 for furnishing 5000 feet of No. 2 yellow pine and 5000 feet of spruce lumber, schedule 3884; delivery navy-yard, Charleston, S. C.; for copies apply to navy pay office nearest navy-yard.

Machine Tools.—Bessolo Invention Co., W. L. Bessolo, president, Box 522, Birmingham, Ala., wants to correspond with manufacturers of drop forges and presses and dies for same, 250-horse-power engine, boiler, pulleys, belting, drills, milling machine and full line of polishing equipment, etc.

Machine-shop Equipment.—Finucane Boiler Works, T. J. Finucane, proprietor, 2110 Providence St., Houston, Tex., wants prices on steel plate rolls, boiler-shop punches, level shears, drill presses, air plant, stay-bolt cutters, etc.

Metals.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will receive bids until September 12 for furnishing 3120 pounds of sheet steel and 6,000 pounds of soft strip steel, schedule 3889; delivery Navy-yard, Washington, D. C.; for copies apply to navy pay office nearest navy-yard.

Metal-working Tools.—James M. Bass, Camden, N. C., wants 14-inch shaper for working iron.

Mica.—See "Electrical Machinery Materials."

Mill Equipment.—Patten Package Co., Calypso, N. C., wants following new or second-hand mill equipment: Steam engine, 6 to 80 horse-power, simple slide or automatic, state dimensions of band wheel and R. P. M.; 6x8 upright steam engine; D. surfacer or four-side planer; R. R. heavy cut-off saw; one each, double, rip and gang rip saws; D. E. lock-corner machine for crates, to take up material up to 24 inches long; hoop-stapling machine; 10-inch or 12-inch conveyor chain with gears; 60 feet 2 15-16 inch and 90 feet 2 7-16 inch shafting; six 2 15-16 inch and nine 2 7-16 inch post boxes; three 2 7-16 inch couplings; 36-inch knife grinder, with or without water attachments; give quotations f. o. b. Calypso.

Milking Machine.—R. G. Peiper, Rason, S. L. P., Mexico, wants information on milking machine; for 10 to 15 cows daily.

Mining Machinery, etc.—A. A. Northern, care of Ashland Oil Mill & Fertilizer Co., Ashland, Ala., wants 150-horse-power Corliss engine; 175-horse-power boiler, with feed-water heater, boiler-feed pump and all fixtures; jaw crusher, 12 tons per hour capacity; Cameron pump to lift 400 gallons per minute to height of 130 feet through pipe line 1000 feet long; set heavy ore-reducing rolls; three sets buhr rocks for grinding graphite ore; blacksmith tools, drill press and other mining tools; second-hand in good condition preferred.

Motor Trucks.—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa., wants two or three three-ton-capacity motor trucks.

Naval Supplies.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will receive bids until September 12 for furnishing chains, etc., and 96 spiral springs, schedule 3881; delivery Navy-yard, Washington, D. C.; for copies apply to navy pay office nearest navy-yard.

Naval Supplies.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. September 12 to furnish at Navy-yard, Charleston, S. C., a quantity of naval supplies as follows: Schedule 3882, marine glue; schedule 3884, yellow pine, spruce, wrought iron or steel pipe, steel rivets, bolts and nuts. Applications for proposals should designate schedules desired by number. Blank proposals furnished upon application to navy pay office, Charleston, S. C., or to bureau. T. J. Cowie, Paymaster-General, U. S. N.

Naval Supplies.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will receive bids until September 12 for furnishing 1000 pounds steel bolts and nuts, schedule 3884; 2500 pounds marine glue, schedule 3882; 500 feet wrought-iron or steel pipe, schedule 3884; delivery Navy-yard, Charleston, S. C.; for copies apply to navy pay office nearest navy-yard.

Naval Supplies.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. September 12 to furnish at Navy-yard, Washington, D. C., etc., naval supplies as follows: Schedule 3852, furnishing and installing turntable for railroad; schedule 3853, power press; schedule 3856, furnishing and installing automatic coal-weighing scales; schedule 3881, Monel metal, strip steel, sheet steel; schedule 3881, Georgia and white pine, sprockets and

plions, spiral springs, chains, oil cups. Applications for proposals should designate schedules desired by number. Blank proposals furnished upon application to the bureau. T. J. Cowle, Paymaster-General, U. S. N.

Paper-bag Machinery.—L. T. Baker, Box 194, Pensacola, Fla., wants addresses of manufacturers of machinery to make paper bags, etc.

Paving, etc.—City Council, W. F. Divine, clerk, St. Petersburg, Fla., receives bids until August 31 for grading, granite curbing and vitrified brick paving on certain streets; plans, specifications, profiles, etc., in office of City Engineer.

Paving.—Board of Public Improvements, St. Louis, Mo., receives bids until September 5 for improving De Baliviere Ave.; plans, specifications, etc., on file at office, Room 300 New City Hall.

Paving.—Realty Sales Co., George A. Finch, president, 463 Calvert Bldg., Baltimore, Md., is receiving proposals to construct avenues in connection with developing industrial suburb at Steelton Park.

Paving.—City of Abilene, Tex., invites bids until September 7 for paving Pine St. crossing of Texas & Pacific Railway; about 361 square yards asphalt macadam, 510 feet cement gutters and 1096 feet oak headers; specifications at office of City Engineer, C. E. Leonard; \$500 check with each bid.

Paving, etc.—Sealed proposals addressed to Board of Awards, in care of City Register, City Hall, Baltimore, Md., received until 11 A. M. September 6 to grade, curb, gutter and pave with asphalt macadam paving Keyworth Ave. from Park Heights Ave. to Reisterstown Rd., and 15-foot alley between Park Heights Ave. and Reisterstown Rd. from Keyworth Ave. to Old Pimlico Rd.; specifications obtainable upon application at office of Commissioners for Opening Streets, City Hall, where plans and profiles are also on file; Board of Awards reserves usual rights.

Paving, etc.—Board of Commissioners, Memphis, Tenn., receives bids until September 5 for following work: 20,000 cubic yards excavation, 8500 square yards asphalt, brick or wood block pavement and 8500 square yards concrete foundation; 5500 square yards asphalt or bitulithic pavement; 4550 square yards concrete foundation and 4550 square yards asphalt or bitulithic pavement; 12,500 cubic yards excavation, 9700 square yards concrete foundation and 16,040 square yards asphalt or bitulithic pavement; 16,500 cubic yards excavation, 16,040 square yards concrete foundation and 16,500 square yards asphalt or bitulithic pavement; 1000 cubic yards excavation and 1467 square yards bituminous macadam pavement; 4500 cubic yards excavation and 6000 square yards of gravel or concrete pavement, 4000 cubic yards excavation and 5700 square yards gravel or concrete pavement; 500 cubic yards excavation, 3900 square yards gravel pavement repaired and 100 linear feet curb and gutter; specifications and profiles at office of City Engineer; E. H. Crump, Mayor; Ennis M. Douglass, City Clerk.

Paving.—City of Bennington, Okla., receives bids until September 5 for constructing about 40,000 feet cement sidewalks; specifications on file with Town Clerk, Jesse L. Sipes.

Paving, etc.—City of Pulaski, Va., invites bids until September 5 for street grading, macadamizing, building steel and stone bridge, etc.; plans and specifications in office of Mayor, John T. Loving.

Paving.—City of Bartlesville, Okla., invites bids until September 6 for grading, curbing, guttering, paving, etc., on Osage Ave.; plans, specifications, profiles, etc., in office of City Engineer; contractor required to give \$2000 bond; J. V. Delametter, City Clerk.

Paving Equipment.—R. A. Reynolds, Box 473, Beaumont, Tex., wants prices on continuous concrete mixer, steel forms and other sidewalk tools.

Paving.—City of Lewisburg, W. Va., receives bids until September 8 for street improvements to cost \$16,500; plans and specifications, etc., on application to J. V. Snyder, engineer, Lewisburg; Robert M. Bell, member of committee.

Paving.—City of Bastrop, Tex., J. N. Jenkins, Mayor, receives bids until September 7 for three blocks of concrete curbing and gutters and gravel macadamizing.

Paving.—Newton County Highway Engineer, Gabe Brown, Neosho, Mo., invites bids until September 8 for constructing granitoid pavement, concrete gutter, etc.; plans, etc., in office of County Clerk.

Porcelain.—See "Electrical Machinery Materials."

Portable Houses.—National Fire Appliance Co., 1717 Central Bank Bldg., Memphis, Tenn., wants addresses of manufacturers of portable houses, including garages.

Plumbing.—F. L. Smith Sons Company, Clarksville, Tenn., wants prices on plumbing for boys' dormitory, school building, etc.

Pulleys.—See "Woodworking Machinery."

Pump.—A. A. Northern, care of Ashland Oil Mill & Fertilizer Co., Ashland, Ala., wants second-hand Cameron pump to lift 400 gallons per minute 130 feet. (See "Mining Machinery.")

Pump.—J. J. Baldwin & Co., 102 Main St., Dawson, Ga., wants hand force pump to wash out locomotive boiler.

Pumps.—See "Water-works."

Railroad Construction.—Bids received until September 15 by El Paso & Southwestern Railroad Co., H. J. Simmons, general manager, Southwestern Bldg., El Paso, Tex., for reconstruction of 10 miles graduation and masonry of roadbed between Lewis Springs and Fairbank, Ariz.; 385,000 cubic yards grading; 3000 cubic yards concrete; 3000 cubic yards foundation excavation; plans and specifications at office of engineer Maintenance of Way, Southwestern Bldg.; bidders required to examine location; certified check for \$1000; rights reserved.

Railway Equipment.—N. H. Harentz, Smyrna, Turkey, wants catalogues, drawings and prices c. i. f. Smyrna from manufacturers of equipment for construction of horse railway, including 75 metric ton rails (vig-nole system); each rail to be nine meters long, 5 per cent. allowance; each rail to weigh 20 kilograms and to have two or three perforations at extremities for adjusting plates; 25 tons cross-bars or sleepers of certain form; each bar 1.8 meters long and to weigh four kilograms; eight railroad points or pointers; 840 fishplates; 1600 rivets and other assorted rivets and materials for mounting ties, etc.; also large number of small and large-sized bolts.

Rivets.—See "Compress Supplies."

Riveting Hammers.—See "Air Compressor, Air Receiver, etc."

Road Construction.—Grainger County Pike Road Commissioners, A. M. Nance, secretary, Rutledge, Tenn., receives bids until September 2 for macadamizing 10 miles of highway; three sections; plans and specifications in engineer's office at courthouse; \$1000 check required with each bid.

Rock Crusher.—Titusville Fruit & Farm Lands Co., E. W. Ellis, president, Titusville, Fla., wants catalogues, etc., on portable rock crusher.

Roofing.—See "Electrical Machinery, Locomotives, etc."

Safe, etc.—Bank of Alston, Alston, Ga., wants prices on safe, vault and other bank fixtures.

Safe, etc.—Bank of Scott, Scott, La., wants prices on safe, vault and other bank fixtures.

Sawmill.—Titusville Fruit & Farm Land Co., E. W. Ellis, president, Titusville, Fla., wants catalogues, etc., on portable sawmill.

Sawmill Machinery.—Rust Lumber Co., Many, La., is receiving bids on two planers, resaw, edger and fan.

Scales.—S. A. Smith & Co., Lagrange, Ga., want prices on scales for weighing cotton bales.

Screws.—See "Hardware."

Seawall.—Sealed proposals, endorsed "Proposals for Seawall," received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 A. M. September 30, and then publicly opened, for seawall at U. S. Navy-yard, Norfolk, Va.; plans and specifications obtained on application to bureau or to commandant of navy-yard named; specification No. 1794; Wm. M. Smith, acting chief of bureau.

Sewer.—Mayor and Board of Commissioners, Fort Worth, Tex., receives bids until September 5 to construct portion of Rose-dale-Magnolia storm sewer; 830 cubic yards concrete, 2900 cubic yards excavation and 1210 cubic yards back fill; plans, specifications, etc., at office of City Engineer, F. J. C. Von Zuben; W. J. Estes, City Clerk.

Sewer Construction.—Proposals addressed to Board of Awards received at office of City Register, City Hall, Baltimore, Md., until 11 A. M. September 6 for constructing storm water drains, contract No. 15; plans on file in office of chief engineer of Sewerage Commission; specifications and plans obtainable upon application at office of Sewerage Commission, Room 304 American Bldg.; a charge of \$5 for each specification and blue-prints; refunded upon return on or before September 6; approximate quantities, 965 feet 15-inch to 24-inch drain; 370 feet 12-inch and

15-inch inlet connections; 5 manholes; 11 inlets.

Sewing Machines.—See "Comfort Machinery."

Shafting.—See "Woodworking Machinery."

Spark Arrester.—Mt. Airy Furniture Co., Mt. Airy, N. C., wants addresses of manufacturers of spark arresters from 32 to 40 inches in diameter.

Stamping Machine.—Imperial Storage Battery Co., 105 Cheapside, Baltimore, Md., wants small geared press, stop feed, 10 inches between guides, to stamp out material not over 3-16 inch thick.

Stamping Equipment.—S. A. Smith & Co., Lagrange, Ga., wants prices on letters for stamping name in concrete building.

Steel Castings.—Standard Machine Manufacturing Co., M. S. Parsons, manager, Carthage, Mo., wants steel castings.

Steel Forms.—See "Paving Equipment."

Steel Tipple.—Marsh Creek Splint & Gas Coal Co., 307 Alderson-Stephenson Bldg., Charleston, W. Va., wants steel tippie for plant at Marsh Fork, near Jarrolds Valley, W. Va.

Stone-cutting Machinery.—See "Electrical Machinery, Locomotives, etc."

Street Lighting.—Proposals received at office of city electrician of Charleston, S. C., until 12 o'clock noon October 18 for lighting streets of Charleston, S. C., for a term of one, two or four years with electricity, gas or other illuminating power equivalent thereto, or partly by one and partly by another; specifications of lighting furnished bidders upon application to city electrician; usual rights reserved; certified check for \$350; Ion Simons, city electrician; R. M. Masters, chairman committee on lighting the city.

Structural Steel.—Sealed proposals, endorsed "Proposals for structural steel for four buildings," received at Bureau of Yards and Docks, Navy Department, Washington, until 11 A. M. September 23, and then opened, for about 389 tons of fabricated structural steel delivered at naval station, Guantanamo, Cuba. Plans and specifications obtainable on application to bureau or to commandant of naval station named. Wm. M. Smith, Acting Chief of Bureau.

Structural Steel.—See "Electrical Machinery, Locomotives, etc."

Structural Steel Plant.—Fay Machinery Co., 126 Liberty St., New York, wants structural steel fabricating plant with capacity of about 250 tons per month.

Tanks.—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa., wants 6000-gallon and 8000-gallon steel storage tanks.

Tiles.—Rev. John H. Brown, Pensacola, Fla., wants samples and prices on tiles for mantels.

Tower and Tank.—B. Kiel, superintendent light and water plant, Cullman, Ala., invites bids on tower and tank for water-works.

Traction Engine.—Titusville Fruit & Farm Lands Co., E. W. Ellis, president, Titusville, Fla., wants catalogues, etc., on farm tractor.

Twine.—See "Compress Supplies."

Trucks.—See "Compress Supplies."

Toothpick Machinery.—A. V. Walnwright, care Carolina Power & Light Co., Raleigh, N. C., wants prices on machine to manufacture toothpicks, etc., from hickory in short lengths.

Vacuum Cleaner.—Russell A. Holt, Box 186, Norfolk, Va., wants prices on vacuum cleaning equipment (except interior piping, which has been installed in partitions) for cellar installation.

Vault.—See "Bank Fixtures, etc."

Vault Door.—H. Montague, Winston-Salem, N. C., wants to purchase second-hand vault door for warehouse.

Ventilation.—See "Cooling Equipment."

Water-works Construction.—City of Wainwright, Okla., will open bids September 7 for construction of water-works; earth dam; water supply adjoining town; daily capacity 50,000 gallons; 15x25-foot building; gas engines and pump; reservoir capacity 8,000,000 gallons; tank 30,000 gallons; plans by Edgar M. Graham, Muskogee, Okla. Address A. A. Hurd, Mayor.

Water-works.—Board of Commissioners, J. R. Thomas, Mayor, Polytechnic, Tex., receive proposals until September 1 for water-works material, including 100,000-gallon steel tank and tower, 5700 feet six-inch cast-iron pipe, 2100 feet eight-inch cast-iron pipe, 3000 feet four-inch cast-iron pipe, special castings, etc.; John Mead, engineer.

Water-works and Electric-light Plant.—Bids will be received until 3 P. M. September 4 for complete equipment for water-works and electric-light plant, Hearne, Tex.; specifications obtainable from O'Neil Engineering Co., Practorian Bldg., Dallas, Tex.

Water-works.—Quartermaster, Fort Barrancas, Fla., receives bids until September 22 for water-works extension; to include extending mains, laying new mains, providing hydrants, connecting pumps, etc.; information on application.

Water-works and Electric-light Plant.—City of Rutherfordton, N. C., will open bids about September 15 for construction of water-works of 120,000 gallons capacity and electric-light plant of 150 horsepower; water-works to include cement reservoir of 300,000 gallons capacity and brick electrically-operated pump-house 15x15 feet; R. Parks Rucker, Charlotte, N. C., engineer in charge; bids for water-works equipment will be opened about September 1.

Water-works.—Bids received by Mayor and City Council, Challicothe, Tex., until 6 P. M. September 7, and then opened, for purchase by the city of all material required in construction of water-works, including boilers, heater, pumps, water-works pipe, valves, hydrants, tank and tower; quantities and specifications can be had by addressing O'Neil Engineering Co., consulting and supervising engineer, 1503 S. Practorian Bldg., Dallas, Tex.

Water-works.—Proposals received till 11 A. M. September 26 for construction of extension to 10-inch water-distributing system; about 370 feet; plans and specifications may be seen only in this office; P. W. Guiney, constructing quartermaster, Fort Sam Houston, Tex.

Well Drilling.—B. Kiel, superintendent light and water plant, Cullman, Ala., invites bids on drilling deep well 720 feet and 10 inches in diameter.

Wire and Wire Machinery.—Webb Fly Screen Manufacturing Co., 3 Little Sharp St., Baltimore, Md., wants prices on wire and wire-stretching machinery.

Wire Stapling Machines.—James M. Bass, Camden, N. C., wants wire stapling machines for basket work.

Woodworking Machinery.—Webb Fly Screen Manufacturing Co., 3 Little Sharp St., Baltimore, Md., wants prices on woodworking machinery.

Woodworking Machinery.—See "Mill Equipment."

Woodworking Machinery.—See "Toothpick Machinery."

Woodworking Machinery.—Shaw Bros. Company, H. K. Burns, secretary and treasurer, Macon, Ga., wants large planer, smaller planer, molding machine, shafting, belting, pulleys and machinery for inside and outside trim work.

Woodworking Machinery.—George W. Muller Bank Fixture Co., 601 Empire Bldg., Atlanta, Ga., wants second-hand 9-inch molder, 30-inch cabinet planer, combination rip-saw and band saw. State condition, terms and lowest price delivered f. o. b. cars Atlanta.

York Manufacturing Co.'s Sales.

Among the more important sales of ice-making, refrigerating, freezing and water-distillation plants and cooling plants for drinking water made by the York Manufacturing Co., York, Pa., within the past few months are the following: Of 1-ton outfits 8 were sold: 2-ton, 15; 3 and 3½-ton machines, 1 each; 4-ton, 21; 5-ton, 3; 6-ton, 17; 8-ton, 12; 10-ton, 3; 11-ton, 9; 12-ton, 1; 15-ton, 2; 17-ton, 3; 20-ton, 8; 25-ton, 2; 30-ton, 3; 35-ton, 2; 40-ton, 2; 50-ton, 2; 60-ton, 2; 65-ton, 4; 75-ton, 1; 80-ton, 2; 85-ton, 2; 100-ton, 1; 125-ton, 2; 150-ton, 2; 350-ton, 1; 360-ton, 1, making 153 refrigerating and ice-making equipments in all. These sales include all sections of the United States, while several important ones were made in Canada and some in Mexico, Colombia, S. A., Panama and India. Many of the sales were made in the South and Southwest, including one 150-ton absorption refrigerating plant at Baton Rouge; a 20-ton plant at Fall River, Tex.; a 30-ton compression side and piping for cold-storage plant at Berkeley Springs, W. Va.; a 100-ton freezing and distilling plant at San Antonio; a 10-ton refrigerating machine, a 20-ton and two 4-ton plants at New Orleans; a 40-ton refrigerating plant at Jacksonville; a 65-ton machine at Wiggins, Miss.; an 80 and a 35-ton compression side and a 25-ton freezing system at Austin; a 20-ton refrigerating plant at Oklahoma City; a 150-ton plant at St. Louis; a 50-ton ice plant at Norfolk; a 65-ton refrigerator plant at Newport, Ark.; a 35-ton ice-making plant at Elizabeth City, N. C., and many others.

INDUSTRIAL NEWS OF INTEREST

Work for Foundry and Machine Shop.
An advertiser in our Classified Opportunities department states that he has profitable work for foundry and machine shop. Further particulars will be obtained by addressing the advertiser as noted in the advertisement.

Searching for Gas and Oil Lands.

The interest in developing new gas and oil territories is shared by geological engineers, as indicated by the geological work of Frederick G. Clapp, 331 Fourth Ave., Pittsburg. He is at present making geological observations in Tennessee in his search for oil and gas territory in that section.

Sale of Chase Special Design Cars.

An order has recently been placed by the Union Mining Co., Mt. Savage, Md., with the Chase Foundry & Manufacturing Co., Columbus, O., for 125 drier cars. These cars are of special design and are to be fitted with the Chase patent flexible and reversible boxing. They are for use in handling the company's products at the Mt. Savage firebrick plant.

Fairbanks One-Yard Dipper Dredge.

A photograph 16x27 inches has been made up and framed by the Fairbanks Steam Shovel Co., Marion, O., showing its one-yard dipper dredge in operation digging an irrigation ditch similar to the work that will be required of one of its machines in the Mecklenburg (N. C.) drainage project. The photograph shows in a graphic way the strength and simplicity of this dredge and the effective work that it is doing. This photograph will make an interesting addition to engineers' and contractors' office wall pictures.

14,000-Ton Structural Steel Contract.

The contract for the structural steel for the new Union Station at Kansas City, Mo., has been awarded to the American Bridge Co., 29 Church St., New York. The contract calls for 14,000 tons of fabricated structural steel. The successful bid was made at \$48.60 a ton. This contract was awarded by the George A. Fuller Construction Co. of New York, the general contractor for the building of this \$4,500,000 union station.

Alberger Companies' Atlanta Office.

A branch office has been opened at 92½ Peachtree St., Atlanta, by the Alberger Condenser and the Alberger Pump companies, 140 Cedar St., New York. It will be under the management of R. S. Michael. The Pacific branch of these companies, located at 503 Market St., San Francisco, is now in charge of C. F. Braun & Co., Inc., which corporation succeeds that formerly known as Braun, Williams & Russell.

Traveling Salesman for Troy Wagons.

F. L. Holloran of Indianapolis has just entered the employ of the Troy Wagon Works Co., Troy, O., as traveling salesman for Troy dump wagons. He has been engaged for the past 10 years as superintendent of steam-shovel work, and is one of the best-known men in that section of the country in his line. The Troy Wagon Works Co. is pushing its sales of the well-known Troy dump wagons, and Mr. Holloran's engagement is in connection with this increased business.

Conroy Manufacturing Co.'s New Plant.

The Conroy Manufacturing Co., with a capital stock of \$50,000, has commenced operations in its new plant at North East, Md. The plant has a modern foundry equipment for both iron and brass. In addition to its general line of jobbers' and machine castings, the company will manufacture the "Conroy" refrigerating hardware. It is largely extending its business in the South in the sale of these items and its portable heaters, ranges, heating stoves and the Glenmore rocking and dumping grate surface for horizontal and locomotive boilers. Chas. P. Bartley is the general manager of the company.

Havemeyer Bars for the Jones Falls Storm-Water Mains.

The 2000 tons of steel reinforcing bars to be used in the construction of the Jones Falls storm-water mains of the Baltimore sewer system will be of the Havemeyer make of the Concrete Steel Co., 29 Broadway, New York. The first shipment on the order has been made, and the entire amount is to be delivered within six months to the Elkant-Tufts Construction Co., Baltimore, the con-

tractor for the work. This large order is for the same kind of reinforcing bars as have already been used to the extent of 1000 tons in the Baltimore sewerage construction, and reflects the estimation in which Havemeyer bars are held.

Public Sale of the Georgia Cotton Mills.

The property consisting of cotton mills, machinery and land of the Georgia Cotton Mills of Dublin, Laurens county, Georgia, will be sold at the county courthouse by public auction on December 4, 1911. The land comprises about 74 acres and the machinery is that required for an 8000-spindle mill, with 260 looms made by the Lowell Machine Shop, Lowell, Mass., and including the auxiliary machinery, mill fixtures, engines and boilers, belting, shafting, tools, electric-light engine and dynamo, elevator, fire apparatus, mill supplies, etc. Further information may be obtained by addressing the trustee, M. B. Lane, president of the Citizens' and Southern Bank, Savannah, Ga.

Heavy Sales of "Standard" Cement.

In addition to the 100,000-barrel contract for cement recently noted in the Manufacturers Record as having been received by the Standard Portland Cement Co., Birmingham, for cement on the Stone & Webster contract at the great dam on the Chattahoochee River near Columbus, Ga., the Standard company has recently closed contracts for 50,000 barrels for the water-works of the Tennessee Coal, Iron & Railroad Co., at Ensley, Ala. Among other smaller contracts are the following: 10,000 barrels for the American Wire & Steel Co., Corey, Ala.; 10,000 barrels for the Woodward Iron Co., Woodward, Ala.; 10,000 barrels for Shorter College buildings, Rome, Ga.; 20,000 barrels for reinforced concrete bridges, Columbus, Ga.; 10,000 barrels for a lumber plant at Laurel, Miss.

Nine American Elevators in One Contract.

The American Machine Co., Louisville, elevator manufacturer, has closed a contract with the Southern Railway Co. for nine tandem, full magnet control, electric elevators for the office and depot buildings at Atlanta. The two passenger elevators have a capacity of lifting 3000 pounds 250 feet per minute, and the seven freight elevators have a capacity of lifting 8000 pounds 100 feet per minute. This contract was awarded after competitive bidding. The company has contracts for installing elevators at St. Louis, Dallas, Birmingham, Atlanta, Evansville, Ind., Muncie, Ind., Huntington, W. Va., Louisville and other places, making more contracts on hand than at any time since commencing business.

Increased Machinery Plant.

A 14-ton press for manufacturing skylight and window sash bars, galvanized gutter, roofing, etc., has been installed by the Chattanooga Roofing & Foundry Co. of Chattanooga. Other new improved metal-shingle machinery has been added and an increased output provided for in all the departments of the plant. Folders describing the factory and products are issued for distribution, and it is stated that the articles named are kept ready for immediate shipment. These products include the "New Century" metal shingles, "Doric" metal shingles, Old English tile metal shingles, ridge roll capping, eave troughs, galvanized or painted roofing and siding, tin roofing in boxes or rolls, stovepipe and elbows, ash-pit doors and traps, "Cahill" grates, well buckets, drip pans, etc. A supplement to shingle catalogue No. 25 treats particularly of the "Doric" metal shingles.

Burroughs Typewriter Adding Machine.

A complete adding machine with a typewriter mechanism combined in the same case has been developed by the Burroughs Adding Machine Co., Detroit. The carriage operates automatically in both directions, line spaces and returns to the starting point. The operator can at any moment change from the typewriter section to the adding-machine section, the keys being at the same level. The pressing of a tabulator key locates the carriage in any desired position. There are 42 characters on the typewriter keyboard in addition to those on the adding-machine section. This machine is designed to supply the demand of some adding-machine users who wish to make a short description of items in addition to the adding, and by the typewriter adding machine it can

be done in one operation. Banks can use the machine for making customers' statements, particularly country statements; also in taking off daily balances of accounts, writing up ledgers, etc.

TRADE LITERATURE.

Safety and Comfort in Lighting and Heating Cars.

The use of the "Thermo Jet" injector in the heating system of railway cars, the relative advantages of electric and Pintsch lights, and a detailed description of the new station and yard coupler for the steam-heating system of trains are treated at length in the August Safety Heating and Lighting News, published by the Safety Car Heating & Lighting Co., 2 Rector St., New York. A long list of "don'ts" for airbrake inventors, which are sufficiently broad to be of interest to inventors in general, is included.

Browning Locomotive Cranes.

A descriptive catalogue of Browning locomotive cranes recently issued by the Browning Engineering Co., Cleveland, gives illustrations and descriptions of the various forms and includes views of the cranes in operation in different classes of work. The Browning company also builds clamshell buckets, electric-lift magnets, wrecking cranes, railroad ditchers, revolving steam shovels and pile drivers. These machines are operated by steam, electricity or compressed air. The catalogue explains the uses to which these Browning cranes and the various attachments may be adapted.

Ameriann Huhn Metallic Packing.

A descriptive card with illustration of the DL brand of packing manufactured by the Ameriann Huhn Metallic Packing Co., 410 E. 32d St., New York, has been issued by the company. The packing to which this brand is applied has been tested for two years, is made of rubber and asbestos, blended carefully for best results. It is made for use on pumps, engines, air compressors, etc., where it will come in contact with steam, ammonia and oils. The confidence of the company in the value of this packing is such that the

fact is emphasized in the sales that you can "send it back if it isn't right." Sample sheets 6x9 inches will be sent on request.

Garvin Machine Co.'s Catalogues.

Catalogue "DA," which supercedes the older edition "D" of the Garvin Machine Co., Spring and Varick St., New York, has just been issued. It is one of four catalogues issued by this company to cover its various lines of machinery manufactures. It includes illustrations and descriptions of its profiling machines, duplex milling, vertical spindle milling, vertical, horizontal and automatic tapping, cam or form milling, drilling and turning, die slotting, hole grinding and screw slotting machines; universal cutter and surface grinder, duplex horizontal drills and gang drills. This company makes a specialty of supplying plants for manufacture of automobiles, cycles, electric and other machine-made articles.

United States Metal Products Co.'s New Catalogue.

A large loose-leaf catalogue has just been issued by the United States Metal Products Co., successor to John W. Rapp Company and J. F. Blanchard Company, 205 W. 4th St., New York, which illustrates and describes its rolled shapes in steel and bronze for trim and moldings. This catalogue is No. 105 and was compiled and designed by C. Dickens Sternfels, advertising manager of the company, with the view of presenting the various shapes in a convenient form for architects' and engineers' use. The loose-leaf feature permits of additions as they are brought out. The importance of metal cornice, moldings, door jambs, window sash, pressed-steel stair risers, etc., in fireproof work combined with concrete and stone construction makes this catalogue of particular value to designing architects and engineers. The various shapes are shown and dimensions given, together with table of weights per linear foot and prices. The metals are cold rolled and give accurate imitation of natural wood finishes with all the advantages of fireproof construction. The products of this company include hollow steel and Kalamain metal doors, windows, partitions, trim, etc.

MOTOR TRUCK NEWS.

Wants to Purchase Motor Trucks.

The Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, writes the Manufacturers Record that it is in the market for two or three three-ton capacity motor trucks. This company handles railroad and contractors' equipments and needs the trucks in order to handle its heavy hauling effectively and economically.

The General Motors Truck Co.

The General Motors Co. of Lansing, Mich., of which the Olds Motor Works is a constituent part, has announced the formation of a selling and service company under the name of the General Motors Truck Co. The formation of the separate company has been effected in order to concentrate the efforts of the manufacturing and selling departments in their respective lines. The marketing of the entire product of its commercial cars will be done by the General Motors Truck Co.

The Senator Motor Car Co.

Offices have been established in the Jenkins Arcade Bldg., Pittsburg, by the Senator Motor Car Co., and the company is fitting up buildings 80x400 feet and 300x400 feet for manufacturing purposes on Pennsylvania Ave., North Side, Pittsburg. In addition to its two-seated roadster and four-seated touring car, this company will manufacture a light delivery truck of 35 horse-power, 1500 pounds capacity, to sell for \$1000, and a heavy delivery truck, 60 horse-power, and three to five tons capacity. The company expects to build 1000 roadsters the first year.

Commer Motor Trucks and Convertible Cars.

Folders issued by Wyckoff, Church & Partidge, Inc., Broadway and 56th St., New York, illustrate and describe the Commer car (convertible) and the Commer truck, together with records of demonstrations that have been made in long runs with loaded trucks. The convertible car is shown with the same chassis used with closed box body, as a luggage cart, and as a long-distance touring car with provision for berths, lockers and a table. The Commer 4½ ton truck is reported as having made a run from Baltimore to Washington recently in two hours and fifteen minutes. The Commer is referred to as "the car of six continents," as it has

been in service for seven years over the roads of foreign countries.

Alco Trucks for the Gulf Refining Co.

That motor trucks are fast replacing horses is receiving added evidence in the purchases by many of the large companies needing such transportation facilities. An instance of this is found in the Gulf Refining Co. of Pittsburg, with branches in the large cities, including New Orleans, Houston, Tex., Tampa, Birmingham and Atlanta. This company since purchasing two trucks from the American Locomotive Co., 30 Church St., New York, added to them until their "fleet" of Alco trucks numbers 16, in various cities. The last order was only recently given for a three-ton truck. Harry S. Haupt, manager of sales of the American Locomotive Co., is reported as stating that as these trucks are purchased after thorough trial in the particular city in which they are to be used, it proves the superiority of the motor truck over the horse and the ability of the Alco truck to be operated under the various conditions existing in different cities.

Fine Records of Motor Trucks in 750-Mile Contest.

Remarkable records were made by the motor trucks entered in the 750-mile contest recently conducted from Chicago to Detroit and return. Twenty-six trucks were entered and 25 completed the run in nine days through the heaviest kind of traveling, the roads being in some places almost impassable and deep in sand or mud. The conditions of road, records of times, penalties, accidents, fuel, road score, etc., were kept by the technical committee. The fact that these trucks should go through such a grueling test with the degree of perfection attained has attracted wide attention and proves the remarkable perfection and possibilities of motor construction. The economy and reliability of motor trucks is well demonstrated by the results of this test, as the cost per ton-mile showed as low as \$0.022. The test was creditable to the contestants, and as there were eight classes entered the winners of each class are given as follows. In their order of cost ton per mile, penalties excluded: The Gramm in its class, \$0.022; the Kelly, \$0.0354; the Mais, \$0.0451; the Gramm in a different class from the first named, \$0.0533; the Nelson & Le Moon,

the Federal, \$0.0736; the Bulk, \$0.117 and no penalties to increase this record in the final averages; the Lincoln, \$0.1518.

Gramm Garages in Many Cities.

The policy of the Gramm Manufacturing Co. of Lima, O., to maintain in all the large cities complete garage and repair facilities for users of Gramm trucks has been extended to New York city by the recent incorporation of the Hextor Motor Truck Co. of New York. P. K. Hextor is president and general manager, and he has had a wide experience in this line. The company will be the metropolitan distributors of the Gramm truck, with headquarters at 103 W. 31st St. A new building of five stories and basement will be ready for occupancy about September 1, in which will be located the salesroom and a complete garage and machine shop, with a full stock of repair parts. This is one of the features of the service which is extended to all Gramm owners, and it has been found to contribute largely to the advantages of owning the Gramm truck in addition to this service depot system the Gramm company has a large number of experts who call upon the owners of Gramm trucks to assist them in obtaining the maximum of efficiency and most satisfactory operation of these machines.

Industrial Items from Atlanta.

[Special Cor. Manufacturers Record.]

Atlanta, Ga., August 28.

The Toledo Computing Scale Co., Toledo, O., has recently opened a district sales office in the Austell Bldg., Atlanta. The sales in the five Southern States comprising this Atlanta district will be controlled from this office. O. E. Schupp, an old employee of the company, previously located in New Orleans, is in charge and is already broadening the scope of the work. He expects in a short time to have his entire territory fully covered by competent salesmen.

The Atlanta Artificial Marble Co., manufacturers of artificial marble interior decorating specialties, has recently moved its office and equipment to Atlanta from Dayton, O. The business of the company will hereafter be transacted from the Atlanta office, in the Forsyth Bldg. A large contract

is at present in hand for the Lebanon county courthouse at Lebanon, Ind. The work on a contract at French Lick Springs, Ind., has just been started. A number of other contracts are being carried out.

The Lindsey Hopkins Aviation Co., Greensboro, N. C., which was recently incorporated with \$30,000 capital stock, has made extensive plans for its future development in the South. An office has been established in Atlanta and an order has been placed for two Curtis biplanes. The services of a licensed aviator have been secured with the view of giving exhibitions in all parts of the South.

O. C. Ross, the new manager of the Atlanta branch of the Allis-Chalmers Company of Milwaukee, will take charge of the Atlanta office about September 1. Mr. Ross has been connected with the Allis-Chalmers Company since 1905. He takes the place made vacant by the recent death of Mr. J. Lea Watson. The business of the New Orleans and Birmingham districts is controlled from the Atlanta office.

Among the recent sales of Anderson oil expellers by the Burruss Engineering Co., Atlanta, are the following: One to the Farmers' Co-operative Cotton Oil Association, Mangum, Okla., where a \$5000 mill is being erected; four to the Farmers & Merchants' Cotton Oil Co., Holdenville, Okla., erecting a \$30,000 plant; 10 to the Roberts Cotton Oil Co. of Memphis, Tenn., erecting a \$75,000 plant at Jonesboro, Ark.; one to J. Sheb Williams who is erecting a \$7000 oil mill at Brookston, Tex.; one to Dixon & Sweet, erecting an oil mill at Offerman, Ga.; six to the Delta Planting Co., Scott, Miss., erecting a \$60,000 oil plant; four to W. M. Black, who is converting a rice mill into an oil plant at cost of \$40,000 at Leeds, Mo.; two to the Newton Oil & Fertilizer Co., Newton, N. C., erecting a \$30,000 mill; three to the Belville Cotton Oil Co., Belville, Tex., erecting a \$25,000 plant, while other contracts have been made with the Farmers' Oil & Gin Co., erecting a \$25,000 plant at Hubbard City, Tex.; the Dixie Industrial Co., for its mill being erected at Benson, Ala.; the Headland Oil & Feed Co., erecting a \$30,000 plant at Headland, Ala., and Mrs. J. B. Ingram, who is building a \$4000 mill at Lisle, N. C.

ROY G. BOOKER.

is possible to secure it. We have at present a novelty works, sawmill, lath and shingle mill and the machinery contracted for ice plant. We have a plentiful supply of small timber, both pine and cypress, and we desire a crate, vegetable barrel and basket factory. There is always a shortage of these articles in the State of Florida during the winter and spring months, the demand is always in excess of the supply and the prices paid guarantee a good profit. We are also in need of a factory to use up the wood waste into wood alcohol. Anyone of good business reputation and some means can get reasonable assistance to develop these enterprises.

Wish also to call your attention to the proposed trolley line between Sanford and Kissimmee. The Citrus Southern Railway has surveyed its line from Sanford to Kissimmee through Taft, and has secured its right of way. We are assured by the management that it will be completed in the near future. It is proposed to use the new electric-gasoline cars on this road.

W. S. VAN DUZOR.

LONGVIEW DEVELOPMENT.

Chamber of Commerce,

Longview, Tex., August 21.

Editor Manufacturers Record:

Longview, with a population of 8000, is certainly doing things. Statistics just gathered show improvements completed or under way since April 1 representing \$500,000. They include \$90,000 for streets, \$30,000 for sewers and \$20,000 in light plant, \$70,000 for residences, \$50,000 for a bank building, etc. Buildings now under construction include a bank costing over \$75,000; Masonic Temple, \$11,000, and new hotel, \$30,000; total, \$500,950.

Our county will spend during the next 12 months over \$100,000 on good roads, the bond issue for same having already been voted, and still the good work is going right on in our little city.

LUTHER ELLISON, Secretary.

Detailed information about towns seeking manufacturing enterprises and offering specific advantages for development and business opportunities can be found under the head of "Classified Opportunities" on pages 76, 77, 78, and under "Cities, Towns and Railroads Inviting Factories" on Pages 103, 104, 105 and 106.

Rebuilding Phosphate Plant.

Reports state that the Phosphate Mining Co., main offices New York, has begun rebuilding its plant at Nichols, Fla., which was recently burned. The buildings, it is stated, will be of reinforced concrete, and contracts have been awarded to the Guarantee Concrete Construction Co. of New York for construction. W. R. Fuller of Tampa has a contract for cement amounting to approximately \$25,000, and the Cameron & Barkley Company of Charleston, S. C., for machinery to cost \$25,000. The total cost of the plant will be about \$250,000.

Officers of the Florida Citrus Exchange are much interested in the idea of the central packing-house as a means of furthering the fruit-growing interests of the State. The plan is to do away with individual packing and branding houses, to establish central packing-house, and, instead of each individual grower of each community adopting a brand name, the fruit put out from the central plants bear the same brand. In this way, instead of there being a great variety of brands emanating from the State to the different parts of the country, none of them becoming known to any degree, but a few brands coming from the different districts of the State will be sent out and each brand thus

become more generally known and a stronger reputation established.

The Montgomery Advertiser publishes a view of a plot of five acres of land owned by A. D. Beavers of Cuba, Ala., upon which he expects to harvest seven bales of cotton this year. From the same land he has already harvested a crop of beans that paid all the expenses of the cotton crop, leaving him between \$60 and \$70 net per acre.

On August 5, 1911, the total outstanding capital stock of the Pennsylvania Railroad Co. was \$450,974,050, divided into 9,019,481 shares. These shares were held by 69,760 persons, the largest number of stockholders in the history of the company.

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS RECORD,

Baltimore, Md., August 30.

The Baltimore stock market continued very dull during the past week. In the trading United Railways common sold from 18 to 17½; do. incomes, 63 to 62½; do. funding 5s, 86¾ to 86; United 4s, 85 to 84½; do. notes, 5s, 90¾ to 90½; Consolidated Gas, Electric Light & Power common, 91; do. preferred, 98¾ to 99; do. 4½s, 85¾ to 86¾; do. 5s, notes, 90¾; Consolidated Gas 5s, 108¾; do. 4½s, 96; do. do. certificates, 1913, 98¾; Seaboard Company second preferred, 56; Mt. Vernon-Woodberry Cotton Duck 5s, 77½ to 77¾; G. B. S. Brewing 4s, 42¾; Citizens' Bank sold at 41¼; Mechanics' Bank, 28¼ to 28; United States Fidelity, 166 to 163; Mercantile Trust, 147; Maryland Casualty, 94.

Other securities were traded in thus: Macon Railway & Light 5s, 98; Augusta & Aiken preferred, 74; Consolidation Coal refunding 5s, 95½; Chicago & Eastern Illinois refunding and improvement 4s, 81½; Atlantic Coast Line convertible debenture 4s, 98½ to 98; Alabama Consolidated Coal & Iron 5s, 84; Baltimore City Passenger 4½s, 100; Jamison Coal & Coke, George's Creek 5s, 92; Houston Gil common, 9¼ to 9; Atlanta & Birmingham 4s, 87; Georgia & Alabama Consolidated 5s, 105½; Baltimore City 3½s, 1928, 92; do. do. 1930, 92 to 92½; do. do. 1954, 94; do. 4s, 1957, 101; do. 5s, 1916, 104½; Consolidation Coal, 100½ to 100; Petersburg 5s A, 106; Atlantic Coast Line Consolidated 4s, 95¾; Baltimore Electric 5s, stamped, 95; Georgia & Florida 5s, 78; Western Maryland 4s, 86¾; Lexington Railway 5s, 95½; Norfolk Railway & Light 5s, 99¼; City & Suburban (Baltimore) 5s, 105; Maryland & Pennsylvania 4s, 89; Carolina Central 4s, 92; Coal & Coke Railway 5s, 95; Georgia, Carolina & Northern 5s, 104½ to 105; Virginia Midland 5th, 106½; Jersey Central Traction 5s, 92½; Virginia Century, 88.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended August 30, 1911.

Railroad Stocks.		Par.	Bid.	Asked.
Atlantic Coast Line	100	122½		
Atlantic Coast of Conn.	100			241
Norfolk Railway & Light	25			
Seaboard Co. Com.	100	23		
Seaboard Co. 2d Pfd.	100	50		54
United Ry. & Elec. Co.	50	17½		18½
Bank Stocks.				
Drovers & Mechanics	100			230
First National	100			148
German-American	100			106
Maryland	20			25½
Merchants	100			185
Bank of Baltimore	100			179
Mechanics	10			28

WHAT IS YOUR TOWN DOING?

The MANUFACTURERS RECORD will be glad to receive brief items of news about business conditions, opportunities for industrial enterprises and the projected establishment of enterprises in every town in the South. It seeks information of this kind from commercial and industrial organizations and from municipal authorities in every town and city of the South. This information is desired for publication without cost of any kind to the sender, and regardless of whether he is a subscriber or not. The MANUFACTURERS RECORD accepts no paid matter in its reading pages. This department is open only to news facts of interest to investors, homeseekers and manufacturers. Correspondents are requested to give their facts in as condensed form as possible, preferably not over 200 to 250 words. Lengthy letters cannot be published.

CULLMAN IMPROVEMENTS.

Commercial Club,

Cullman, Ala., August 22.

Editor Manufacturers Record:

Some time ago we contracted for seven miles of cement sidewalks in the city. This work is now about half done, and our people are so well pleased that they are now petitioning the City Council to extend the system to the city limits on all sides. This no doubt will be done, which will mean many more miles of improvement for us. The Council at a meeting held last night authorized the superintendent of the light and water plant to secure estimates on another deep well for the city's water supply. The one now in use is 720 feet deep. The instructions are for the new one to be 10 inches in diameter, to be bored until sufficient water is obtained. This is necessitated by the growth of the city. A new air compressor will also be installed and estimates are to be obtained on a tower tank which is contemplated. Figures are wanted on this work, specifications, etc., to be had from B. Kiel, superintendent Cullman Light and Water Plant. Arrangements are also being made with the tariff association for increasing the capacity of the fire department so as to place the city on a second-class basis, we now being rated third

class. This will mean a saving in insurance rates of 50 per cent.

While the city is progressing, the county is not idle. A great meeting will be held here on the 29th inst. for the purpose of locating a highway running north and south across the State. Senator Bankhead, Congressman Oscar Underwood and other prominent men will be here to assist us, at the same time a Cullman County Good Roads Association will be formed for the purpose of building lateral pike roads out from this main highway, for which purpose we expect to issue at least a half-million of bonds.

We appreciate the visits of the MANUFACTURERS RECORD, and personally I am always anxiously awaiting its coming. We consider it the best investment our club has made. Cullman county is rapidly coming to the front, more inquiries now being received for homes than ever before. This is, we deem, largely attributable to our having a live commercial organization and the publicity we derive from our connection with such great magazines as yours.

L. N. BUELL, Secretary.

TAFT GROWS.

Taft, Fla., August 26.

Editor Manufacturers Record:

The town of Taft continues to grow, but we desire a much more rapid growth, if it

Union 100 136 141
Western 20 42

Trust, Fidelity and Casualty Stocks.

Fidelity & Deposit 50 151
Maryland Trust Pfd. 100 116
Maryland Casualty 25 92 1/2 95 1/2
Merc. Trust & Dep. 50 146 148
Union Trust 50 68
U. S. Fidelity & Guar. 100 160 164 1/2

Miscellaneous Stocks.

Ala. Con. Coal & Iron 100 20 25
Ala. Con. Coal & Iron Pfd. 100 91 92
Con. Gas, E. L. & P. Co. 100 39
Consolidated Coal 100 38 1/2 101
G. B. S. Brewing Co. 100 3 1/2 3
Georges Creek Coal 100 3 1/2 3
Baltimore Brick Pfd. 100 29

Railroad Bonds.

Atlantic Coast 1st 48 95 1/2 96
At. Coast Conv. Deben. 48 97 3/4 98 1/2
At. Coast Conv. 48, Cfs. 5-208 97 3/4 98 1/2
Balto. & Annap. S. L. 58 74 76
Balto. & Harris. 58 102 108
Balto. & Harris. Ext. 58 102 108
Carolina Central 48 102 108
Charleston & West. Car. 58 105 106
Coal & Coke Railway 58 94 1/2 95 1/2
Coal & Iron Railway 58 101 1/2 102 1/2
Georgia & Alabama 58 105 105 1/2
Georgia & Florida 58 105 105 1/2
Georgia, Car. & North 1st 58 104 3/4 105 1/2
Georgia Pacific 1st 68 112 113 1/2
Georgia South. & Fla. 1st 58 107 107
Macon, Dublin & Savannah 58 96 1/2 98
Maryland & Pennsylvania 48 88 1/2 89 1/2
Potomac Valley 1st 58 105 107
Raleigh & Air. 1st 58 104 104
Seaboard 48, Stamped 86 1/2 87
Seaboard Adjustment 58 75 1/2 76
Seaboard Refunding 48 80 1/2 81 1/2
Seaboard & Roanoke 58 100 100
South Bound 58 107 107
Virginia Midland 3d 68 106 1/2
Virginia Midland 5th 58 106 1/2
Virginia Midland G. M. 58 106 1/2
Western Maryland 48 87 1/2 88
Wilmington & Weldon 48 96 98

Street Railway Bonds.

Atlanta Con. St. Ry. 58 100 100 1/2
Baltimore City Passenger 58 100 100 1/2
Baltimore City Passenger 428 97 1/2
Balto., Sp. Pt. & C. 428 108 110 1/2
Baltimore Traction (N. B.) 58 96 97
Charleston Con. Elec. 58 105 106
City & Suburban 58 (Balto.) 104 105
City & Suburban 58 (Wash.) 99 1/2 100 1/2
Fairmont & Clarksburg Trac. 58 92 96
Lake Roland Elevated 58 92 96
Lexington Railway 1st 58 97 1/2 99
Macon Railway & Light 58 97 1/2 98 1/2
Maryland Electric Railway 58 98 1/2 99 1/2
Memphis Street Railway 58 94 1/2
Newport News & Old Point 58 88 89
Newport News & O. Pt. G. M. 58 88 89
Norfolk & Portsmouth Trac. 58 84 84 1/2
Norfolk Railway & Light 58 82 82 1/2
United Railways 1st 48 62 1/2 62 1/2
United Railways Funding 58 95 1/2 95 1/2
United Railways 58 Notes 95 1/2 95 1/2

Miscellaneous Bonds.

Ala. Con. Coal & Iron 58 82 82
Baltimore Brick 58 94 1/2 96
Baltimore Electric 58, 814 94 1/2 96
Consolidated Gas 58 96 96 1/2
Consolidated Gas 428, 1913, Cfs. 98 1/2 98 1/2
Con. Gas, Elec. Lt. & P. 428 86 1/2 87
Consolidation Coal Refdg. 58 95 1/2 95 1/2
Fairmont Coal 1st 58 96 1/2 97 1/2
G. B. S. Brewing 1st 48 42 1/2 43
Mt. Vernon-Woodley's Cot. Duck 58 77 1/2 77 1/2
United Elec. Lt. & P. 428 93 1/2 96

At Bay St. Louis, Miss., bids will be received until October 2 for \$20,000 of 5 per cent. 5-20-year street and school bonds. Further particulars will be found in the advertising columns.

FINANCIAL CORPORATIONS.

Ala., Cullman.—A new bank is reported being organized.

Ala., Spring Garden.—A letter to the Manufacturers Record says the organizing of a bank at Spring Garden has been indefinitely postponed.

Ark., Lewisville.—Reported chartered: The People's Bank & Loan Co.; capital \$150,000; W. D. Stewart, president; G. W. Dolson, vice-president; N. D. Harrel, secretary-treasurer.

Ark., Tuckerman.—Reported approved: First National Bank of Tuckerman; capital \$25,000; organizers, E. V. Holt, Tuckerman; J. W. Lindley, D. C. Dowell, L. D. Smith and L. T. Hayden.

Ark., Monticello.—Official: The Drew County Abstract & Guaranty Co. incorporated; capital \$5000. Business began August 1. Incorporators, J. S. Harris, Curry Bldg.; J. C. Knox, W. W. Alson and R. F. Hardy, Monticello, Ark.

Fla., Orlando.—The People's National Bank of Orlando chartered; capital \$50,000; James C. Patterson, president; C. A. Campbell, vice-president; C. E. Johnson, cashier; William G. Talton, assistant cashier.

Ga., Alston.—Official: The Bank of Alston chartered; capital \$25,000. Officers not yet elected. Business is expected to begin about October 1. D. L. Williamson and others interested.

Ga., Adairsville.—Official: The Farmers' Bank incorporated; capital \$25,000; incorporators, R. L. Franklin, president; C. W. Satterfield, vice-president; W. A. McCutchen, S. Davis, J. H. Gunn, J. T. Bray and T. J.

Noland. Business is to begin about October 1.

Ga., Atlanta.—The Travelers' Bank & Trust Co., capital \$200,000, it is reported, expects to begin business about October 1. E. L. Adams is president.

Ga., Atlanta.—The Travelers' Bank & Trust Co., capital \$200,000, is reported being organized with E. L. Adams as president.

Ga., Stephens.—Official: The Bank of Stephens chartered; capital \$25,000; John F. Holden, president, Crawfordville; W. F. Adkins, vice-president, and O. H. Adkins, cashier, both of Stephens. Business is expected to begin about October 15.

Ga., Stephens.—The Bank of Stephens, capital \$25,000, is reported organized with directors thus: J. F. Holden, Crawfordville, president; W. F. Adkins, vice-president; O. H. Adkins, cashier, and L. C. Howard, H. C. Young, J. H. Hunter, Jr., E. O. Young, M. J. Nicholson, J. S. Bowling, M. L. McWhorter, W. B. Jackson and B. H. Sanders.

Ga., Union Point.—Official: Our Bank, capital \$25,000, has completed organization by electing directors thus: L. O. Benton, president; Ira W. Ivey, vice-president, and R. F. Bryan, cashier; H. C. Mann, W. P. Carlton, J. J. Rutherford, W. M. Fanning, H. D. Carson and E. E. Newsom.

La., Scott.—Official: The Bank of Scott chartered; capital \$17,000; organizers, L. A. Prejean, J. M. Keith, Wm. Butcher, J. M. Detchemeny, Luc Le Blanc, Joseph Sonnier and Alonzo Lacy. Business is to begin about October 15.

Miss., Pittsboro.—Official: The First State Bank chartered; capital \$10,000; Gull Baileer, president; B. F. Harrelson, vice-president; N. R. Lamar, cashier. Business is to begin November 1.

N. C., Brunswick.—The Bank of Brunswick is reported organized with an authorized capital of \$25,000; incorporators, Mayor Price Furpless, John Jenrette, C. Ed Taylor, J. B. Ruark, Jens Berg, W. H. Pyke and Capt. William St. George, all of Southport, and Robert Ruark of Wilmington.

N. C., Murfreesboro.—The Citizens' Bank of Murfreesboro is reported organized with \$10,000 capital by T. E. Vann, L. J. Lawrence, S. T. Caroon, Stanley Winborne and others.

Okla., Shattuck.—Reported chartered: The German American State Bank, capital \$15,000, with directors thus: Jacob Weber, J. B. Weber and Edward B. Weber, all of Shattuck.

S. C., Camden.—The Loan and Savings Bank, capital \$25,000, will, it is stated, begin business about September 15 with John S. Lindsay as cashier.

S. C., Donalds.—The Farmers and Merchants Bank is reported to have been granted a commission; capital \$25,000; petitioners, Stephen W. Brown and C. W. Tribble.

S. C., Silver Street.—The Farmers' Bank of Silver Street, capital \$20,000, will, it is stated, begin business September 15. H. O. Long is president and acting cashier.

Tenn., Estill Springs.—Official: The Bank of Estill Springs, capital \$10,000, is organized with W. K. Dickens, president; R. C. Byrom, vice-president; E. H. Ashcroft, cashier; Jas. Selvally, Jas. T. Tyner, K. W. Hudgins, R. J. Corn and H. S. Hudgins, directors.

Tex., Pecos.—A building and loan association capitalized at \$16,750 is reported organized with C. L. Heath as secretary. Directors are to be chosen September 3.

Tex., San Juan.—Reported chartered: The San Juan State Bank, capital \$10,000; incorporators, R. L. Hammond, Ralph L. Angley and Eugene R. Kean.

Tex., Saltillo.—The First State Bank, capital \$10,000, is reported organized with directors thus: J. D. Arthur, president; T. B. Caldwell, Mount Pleasant, and Dr. Jesse Shrode, Saltillo, vice-presidents; Whitley Reed, Mount Pleasant, cashier; W. E. Arthur of Saltillo and Dr. G. Z. Minter and Tom White of Pine Forest.

Tex., Saragosa.—The Toyah Valley State Bank is reported to have begun business. Directors: President, C. M. Honaker; vice-president, J. G. Love; cashier, W. C. Salt-house; Stump Robbins, E. W. Johnson, T. B. Pruett and D. Davis.

Tex., Chireno.—The Chireno State Bank is reported to have filed application for a charter; capital \$10,000; incorporators, H. P. Fall, R. V. Fall and B. F. Moore.

Va., Richmond.—Reported approved: The Central National Bank of Richmond, Va.; capital \$250,000; organizers, C. Tutzler, W. M. Schwarshild, C. F. Grinnell, B. B. Bowles and Wm. C. Schmidt.

W. Va., Mill Creek.—Official: The Bank of Mill Creek, incorporated with \$25,000 capital,

has elected Wirt Ward president and M. H. Mason vice-president.

NEW SECURITIES.

Ala., Birmingham.—Press dispatches state that date for opening bids for the sale of \$1,300,000 of 5 per cent. 30-year general deficiency bonds has been postponed until 11 A. M. September 12. Chas. H. Abbott is City Comptroller.

Ala., Brewton.—Official: November 12 an election is to be held in Escambia county to vote on \$100,000 of road bonds.

Ala., Dothan.—Reported voted: \$70,000 of light-plant bonds.

Ala., Eufaula.—Reported voted: \$40,000 of electric-light-plant bonds.

Ala., Marion.—Official: October 2 an election is to be held to vote on \$110,000 of 5 per cent. 20-year Perry county road bonds. J. H. Shivers is Judge of Probate.

Ala., Mobile.—According to press dispatches, \$500,000 of Mobile county road bonds will be issued in January.

Ala., Montgomery.—Official: September 4 an election is to be held to vote on \$25,000 of 5 per cent. 30-year bonds—\$25,000 for general purposes, \$50,000 for sanitary sewers and \$25,000 for parks; denomination \$1000. Address J. T. Letcher, commissioner of accounts and finances.

Ala., Montgomery.—The question of issuing \$250,000 of bonds to cover deficit is reported under consideration. J. T. Letcher is Commissioner of Accounts and Finances.

Ala., Ozark.—Official: All bids received August 17 for the \$15,000 of 5 per cent. 20-year sewerage bonds were rejected, and new bids for same are now being received; denomination \$1000; dated July 15, 1911. Address J. E. Acker, Mayor.

Ala., New Decatur.—Reported that all bids received August 21 for the \$20,000 of 5 per cent. 25-year school bonds were rejected, and that new bids are to be asked. F. A. Bloodworth is City Treasurer. A later report says the bonds have been purchased by Spitzer-Rorick Company of Toledo, O.

Ala., Union Springs.—Reported that an election is to be held to vote on bonds for sewerage system.

Fla., Bartow.—Official: October 10 an election is to be held in Polk county to vote on \$500,000 of 5 per cent. road bonds; maturity \$1000 each period—1927, 1932, 1937, 1942 and 1947; denomination \$500. Address County Commissioners.

Fla., Jacksonville.—September 26 an election is to be held to vote on \$195,000 of sewerage extension, \$20,000 of park and \$35,000 of water-works and electric-light bonds to be issued during 1911, and \$100,000 of street, \$100,000 of water-works and electric-light and \$50,000 of park bonds to be issued during 1912.

Fla., Palmetto.—Official: An election is to be held September 12 to vote on \$5000 of water-works, \$5000 of sewer, \$5000 of street 6 per cent. 30-year bonds. W. B. Whitehead is Mayor.

Fla., West Palm Beach.—Official: \$65,000 of 5 per cent. street, sewer, fire department and dock bonds are to be issued; denomination \$500.

Ga., Lawrenceville.—Reported voted: \$35,000 of water-works and \$15,000 of sewerage bonds.

Ga., Macon.—Official: The Wm. R. Compton Bond & Mortgage Co. purchased at \$5858 premium \$750,000 of 5 per cent. 15-year railroad aid funding bonds voted July 11, 1911; dated July 1, 1911; denomination \$1000.

Ga., Newnan.—T. M. Goodrum, chairman finance committee, will receive bids until 10 A. M. September 11 for \$50,000 of street-improvement bonds; denomination \$1000.

Ky., Newport.—Official: The Newport National Bank of Newport, Ky., purchased on August 23, at \$801.50 premium and accrued interest, \$100,000 of 4 per cent. 30-year street-improvement bonds; denomination \$500; dated July 1, 1911; maturity July 1, 1941. Address Sinking Fund Commissioners. John W. Davis is City Clerk and Chester A. Kesler City Auditor.

La., Many.—Bids will be received by W. S. Mitchell, secretary and superintendent, it is reported, for \$15,000 of 5 per cent. 1-15-year Pleasant Hill School District bonds, dated July 1, 1911; denomination \$500; also for \$2000 of 5 per cent. Florien School District bonds, Sabine Parish. Bids will be opened not later than September 9, but may be opened on September 2.

La., Rayville.—Reported that an election is to be held to vote on 40-year water-works bonds.

La., Vidalia.—Official: Bids are now being

received by Calhoun & Calhoun, attorneys of School Board, for \$20,000 of 5 per cent. bonds of school district No. 5, Concordia parish; denomination \$500; dated October 1, 1911; maturing beginning 1913 and ending in 1930. Bonds were voted June 29, 1911. D. E. Stricker is superintendent of schools.

Miss., Bay St. Louis.—Official: Ordinance has been prepared providing for the issuing of \$50,000 of 5 per cent. 5-20-year bonds for protecting city from overflow and other like dangers, street improvement and school-building bonds. Denomination \$100. R. W. Toulme is Mayor and Harry Hood Beyer, Secretary.

Miss., Clarksdale.—Official: Planters' Bank, Clarksdale, purchased at par, net, on July 25 the \$60,000 of 5 per cent. 20-year light, water and sewer extension bonds voted June 30, 1911; denomination \$500; dated September 1, 1911; maturity September 1, 1931. M. W. Purnell is City Clerk.

Miss., Greenville.—Reported defeated: \$3,000 of sewerage bonds.

Miss., Tuka.—An official letter confirms report that the Compton Bond & Mortgage Co., St. Louis, Mo., purchased at \$300 premium \$35,000 of 6 per cent. 25-year road bonds of First Supervisors' District; denomination \$500. R. W. Carter is chairman of Commissioners.

Miss., Vicksburg.—Notice is given that bids will be received until noon September 5 for \$1100 of 5 per cent. Fisher's Ferry bridge and road bonds, Warren county. Address J. D. Laughlin, clerk Board of Supervisors of Warren County.

Mo., Campbell.—Reported voted: \$22,000 of water-works bonds.

Mo., Columbia.—September 8, it is reported, an election is to be held to vote on \$100,000 of road bonds.

Mo., Fulton.—The commissioners of Fulton special road district are reported to have been requested to call an election to vote on \$100,000 of road bonds.

Mo., Jefferson City.—Official: Voted August 1: \$3,500,000 of 3 1/2 per cent. 8-12-year bonds for new capitol building. John P. Gordon is State Auditor.

Mo., Joplin.—Official: Defeated: \$5,000 of fire-department bonds. J. F. Osborne is Mayor.

Mo., Kansas City.—The Pioneer Trust Co. of Kansas City is reported to have been awarded at \$7087.40 premium \$25,000 of 4 per cent. hospital, \$60,000 of 4 1/2 per cent. levee, \$50,000 of 4 1/2 per cent. sewer and \$5,000 of 1 1/2 per cent. workhouse 20-year bonds.

Mo., Kirksville.—Reported that \$37,500 of 6 per cent. bonds of Adair County Drainage District have been sold at par; denomination \$1000.

Mo., Kirkwood.—Official: Bids will be opened September 22 by Jas. B. Wilde, City Clerk, for \$10,000 of 5 per cent. 10-20-year bonds of Kirkwood, St. Louis county, voted August 19, 1911, for extension and improvement of electric-light system. Denomination \$500; dated September 1, 1911.

Mo., Maryville.—Reported voted: \$100,000 of municipal water-works bonds.

Mo., Paris.—September 12, it is reported, an election is to be held in Monroe county to vote on courthouse bonds.

Mo., Savannah.—Bids are reported being received until 11 A. M. October 2 for \$20,000 of 5 per cent. library and school building bonds voted August 8.

Mo., Unionville.—C. W. Mullenix Co., treasurer, is reported receiving bids until 2 P. M. September 12 for \$8000 of 5 per cent. 2-5-year hospital bonds; denomination \$500.

Mo., Webster Groves.—Notice is given that bids will be received until 8 P. M. September 7 for \$28,000 of 4 1/2 per cent. 10-20-year school-district bonds. Address F. H. Miller, Secretary, 659 Tuxedo Blvd.

N. C., Burlington.—Official: \$60,000 of 5 per cent. 30-year street and sidewalk improvement bonds have been sold; denomination \$500; dated July 1, 1910; maturity July 1, 1940.

N. C., Hendersonville.—Official: C. A. Webb & Co. of Asheville, N. C., have purchased \$15,000 of 6 per cent. graded school bonds.

N. C., High Point.—Official: Bids will be received until 2.30 P. M. September 11 by Fred N. Tate, Mayor, for \$20,000 of water and sewer, \$20,000 of street improvement and \$10,000 of school building 5 per cent. 20-year bonds. Denomination \$1000; dated October 1, 1911.

N. C., Kenansville.—E. H. Rollins & Sons, New York, are reported to have purchased at

[For Additional Financial News, See Pages 74 and 75.]

Established 1835 The Merchants National Bank

South and Water Sts., BALTIMORE, MD.
DOUGLAS H. THOMAS, President.
WM. INGLE, Vice-President and Cashier.
J. C. WANDS, Asst. Cashier.
JOHN E. H. DUNN, Asst. Cashier.
Capital \$1,500,000
Surplus and Profits - - - \$900,000
Deposits, \$12,000,000
Accounts of Banks, Bankers, Corporations and Individuals solicited. We invite correspondence.

THE FIRST NATIONAL BANK OF KEY WEST, FLA.

Called States Depository and Disbursing Agent.
Capital - - - \$100,000
Surplus and Undivided Profits - \$40,000
A general banking business transacted.
Special attention given to collections.

MANUFACTURERS and JOBBERS

Frequently finds it necessary to have BANKING FACILITIES in addition to those offered by local banks.

FIRST NATIONAL BANK OF RICHMOND, VA.

With assets of nine million dollars, offers just the additional facilities required.
Jno. B. Purcell, President.
Jno. M. Miller, Jr., Vice-President and Cashier.

INVESTMENT SECURITIES

Southern Stocks and Bonds
Municipal and Corporation
Cotton Mill Stock a Specialty

WM. S. GLENN, Broker - SPARTANBURG, S. C.

Delaware Trust Company WILMINGTON, DELAWARE

INCORPORATING under broad, liberal, safe and stable Delaware laws. A fully equipped department for proper organization and registration of corporations.

BANKING AND TRUST department gives special attention to out of town customers' accounts.

TITLE DEPARTMENT examines and guarantees title to realty throughout Delaware.
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EDWARD T. CANBY, President.
J. ERNEST SMITH, V.-Pres. and Gen. Counsel.
WM. G. TAYLOR, Treasurer.
HARRY W. DAVIS, Secretary.
W.W. PUSEY, 2d Title and Real Estate Officer.

H. B. Wilcox, President. Jos. R. Foard, V.-Pres.
Wm. S. Hammond, Cash. Saml. W. Tschudi, A. Cash.
R. E. Bolling, A. Cash. Raymond B. Cox, Auditor.

The First National Bank 17 South St., Baltimore, Md.

Capital - - - \$1,000,000
Surplus and Net Profits - - - 560,000
Resources - - - 9,000,000

Especially well equipped to handle the business of Southern Manufacturers, Corporations and Individuals. We invite a call or correspondence.
1863-48 Years of Success-1911

The National Exchange Bank OF BALTIMORE, MD.

Hopkins Place. German and Liberty Sts.
Capital \$1,000,000
July 15, 1908, Surplus and Profits \$671,631.60
OFFICERS:

WALDO NEWCOMER, President.
SUMMERFIELD BALDWIN, Vice-President.
R. VINTON LANSDALE, Cashier.
C. G. MORGAN, Asst. Cashier.

Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

JOHN NUVEEN & CO.

1st. Nat. Bank Bldg., CHICAGO

We purchase SCHOOL, COUNTY and MUNICIPAL BONDS. Southern Municipal Bonds a Specialty.

Write us if you have bonds for sale.

FLORIDA TRUST CO.

JACKSONVILLE, FLA.

Authorized Capital, - - \$600,000

Mortgages, Real Estate and Securities Bought and Sold.
Acts as Guarantors, Trustees, Executors, etc.

Southern Steam Railroad Securities

DEALT IN

F. J. LISMAN & CO.

Specialists in Steam R. R. Securities

Members New York Stock Exchange.

30 Broad Street NEW YORK

29 Pearl Street, Hartford.

Land Title & Trust Bldg., Philadelphia.

CAPITAL AND SURPLUS - - - \$3,500,000

THE BALTIMORE TRUST CO. BALTIMORE, MD.

Solicits Accounts of Banks, Bankers, Corporations, and Individuals
Interest Allowed on Deposits Subject to Check.
Special Rates Made on Time Deposits.

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G. C. MORRISON, Second V.-Pres. SAMUEL C. ROWLAND, Third V. Pres.
C. D. FENHAGEN, Secretary-Treasurer

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All work executed by, or under direct supervision of Certified Public Accountants

INTERSTATE AUDIT COMPANY

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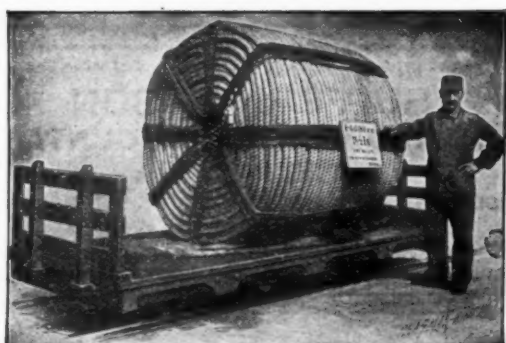
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TRANSMISSION ROPE

\$30,833.67 the \$30,000 of Duplin county court-house bonds.

N. C., Laurinburg.—Notice is given that bids will be received until 10 A. M. September 15 for \$20,000 of 6 per cent. 10-30-year public-road bonds of Spring Hill township, Scotland county. W. G. Rule is chairman and C. E. Muse, clerk, to the board.

N. C., Murphy.—C. A. Webb & Co. of Asheville is reported to have purchased \$50,000 of Murphy township, Cherokee county, road bonds.

N. C., Raleigh.—An official letter denies report that bond election is to be held in the near future. J. J. Johnson is Mayor.

N. C., Red Spring.—Notice is given that bids will be received until 11 A. M. September 21 for \$35,000 30-year water-works and sewerage bonds, interest not exceeding 6 per cent; denomination \$500. Address A. B. Pearsall, chairman Board of Public Works.

N. C., Scotland Neck.—Bids will be received until noon September 18 for \$3000 of 6 per cent. 10-16-year bonds of Scotland Neck Graded School; denomination \$500; dated September 18, 1911. Address A. L. Purrington, secretary of the board of trustees.

N. C., Winston-Salem.—Press dispatches state that at the September meeting of the Salem commissioners a resolution will probably be introduced calling for an election to vote on \$30,000 of school, \$10,000 of street and \$10,000 of sewerage extension bonds.

Okla., Butler.—September 5, it is reported, an election is to be held to vote on \$25,000 of water-works bonds.

Okla., Hobart.—Reported that the \$100,000 of park, water and city hall bonds are soon to be offered for sale. C. G. Long is Mayor.

Okla., Muskogee.—Reported voted: \$500,000 of bonds by Muskogee county for a combination city and county courthouse.

Okla., Stillwater.—Reported voted: \$15,000 of water-works-extension bonds.

Okla., Tulsa.—Official: Bids will be received until 9:30 A. M. September 12 by E. B. Cline, City Auditor, for \$90,000 of water-works, \$100,000 of sewer, \$50,000 of central fire station, \$33,000 of street improvement, \$7000 of public-library site and \$11,900 of paving 5 per cent. 20-year bonds; total \$291,000. Denomination \$1000.

S. C., Ehrhardt.—Official: \$10,000 of 20-year bonds of Ehrhardt School District have been voted and are about to be put on the market. J. L. Copeland, M. D., is chairman Board of Trustees.

S. C., Ebenezer.—Reported voted: School district improvement bonds.

S. C., Hampton.—Reported defeated: \$25,000 of Hampton county road bonds.

S. C., Lexington.—Official: Bids will be received until noon September 25 for \$10,000 of 6 per cent. bonds of Lexington School District No. 1. Address T. P. Meetez, chairman. Karl F. Oswald is secretary and S. M. Gross, treasurer.

Tenn., Bristol.—Reported that \$40,000 of water bonds, in addition to the \$300,000 issue now outstanding, are to be put on the market at once.

Tenn., Crossville.—Bids will be received until noon September 15 for \$40,000 of 5 per cent. 10-20-year Cumberland county Memphis-to-Bristol highway bonds. Address John S. Reed, First National Bank, Crossville.

Tenn., Elizabethton.—Official: Voted: \$20,000 of 5 per cent. 15-20-year Carter county road bonds; denomination \$500; dated August 21, 1911. Address J. M. Edens.

Tenn., Lexington.—Reported voted: Water and light bonds.

Tenn., Maryville.—September 20, it is reported, an election is to be held in Blount county to vote on \$75,000 of water-works and \$30,000 of sewer system bonds.

Tenn., Memphis.—Reported voted: \$275,000 of bonds for permanent site for the Tri-State Fair.

Tenn., Memphis.—Reported voted: \$275,000 of playground and park bonds.

Tenn., Memphis.—The Union & Planters' Bank & Trust Co. of Memphis, Tenn., according to press reports, was awarded at \$9837.38 premium \$1,111,000 of 4½ per cent. city bonds; dated August 1, 1911.

Tenn., Nashville.—N. W. Halsey & Co. of Philadelphia are reported to have purchased \$150,000 of 4 per cent. Davidson county bonds.

Tenn., Rogersville.—Reported defeated: \$200,000 of Hawkins county road bonds. L. R. Baker is County Clerk.

Tenn., Trenton.—September 28, it is reported, an election is to be held to vote on \$12,000 of electric-light bonds.

Tenn., Whitesville.—Official: September 20 an election is to be held to vote on \$10,000 of 6 per cent. 10-30-year street-improvement bonds. Denomination \$200 or more. J. W. Bass is Mayor.

Tex., Abilene.—As soon as the \$20,000 of water bonds recently voted have been approved by the Attorney-General they will, according to press dispatches, be put on the market.

Tex., Austin.—An official letter confirms report that an election is to be held October 10 to vote on \$33,000 of sewer bonds. If the election carries, bonds will shortly thereafter be offered to the public. A. P. Woodridge is Mayor.

Tex., Bryan.—Reported voted: \$20,000 of 5 per cent. 40-year water, light and sewerage bonds.

Tex., Hillsboro.—Reported voted: \$30,000 of 5 per cent. 15-40-year bonds as follows: Paying off unbonded indebtedness, \$10,000; extending and improving water-works system, \$15,000; sewerage extension and repair, \$5000.

Tex., Lewisville.—Official: Voted: \$75,000 of bonds for road improvements in Denton county district No. 1. Address John Sparks, Garza, Tex.

Tex., Paris.—Official: W. F. Gill, County Auditor, will receive bids until September 28, inclusive, for \$100,000 of 5 per cent. Lamar county road bonds; dated October 10, 1911; maturity October 10, 1951; denomination \$500.

Tex., Rice.—Official: T. W. Neal, secretary School Board, is receiving bids for \$16,000 of 5 per cent. bonds of Rice school district No. 2; denomination \$1000; maturity 1951.

Tex., Savoy.—Official: The State Board of Education, O. C. West, president, purchased on August 10 at par \$8000 of 5 per cent. 10-40-year Savoy Independent school district bonds. Denomination \$500; dated July 15, 1911; maturity July 15, 1951.

Tex., Waco.—The Commercial Trust Co. of Kansas City is reported to have purchased \$70,000 of school and \$80,000 of sewer bonds at \$6455 premium, and the Texas Fidelity & Bonding Co. of Waco \$50,000 of street bonds at \$3235 premium; interest 5 per cent.

Tex., Wichita Falls.—Official: Defeated: \$300,000 of Wichita county road bonds. It is, however, expected that the Legislature will pass a law permitting Precinct No. 1, Wichita county, to vote on \$150,000 of bonds for improving road and streets in Commissioners' Precinct No. 1. D. E. Thomas is Commissioner.

Va., Danville.—Ordinances are reported to have been introduced in the Common Council providing for \$150,000 of electric-light and power bonds and \$30,000 of N. Main St. improvement 4½ per cent. 30-year bonds.

W. Va., Bramwell.—Official: Bids will be received until noon September 16 for \$12,000 of 6 per cent. 25-year road, street and bridge bonds voted July 29, 1911; denomination \$1000; dated July 31, 1911. J. C. Pack is town recorder.

W. Va., Clarksburg.—Official: Bids will be received until 1 P. M. September 22 by James N. Hess, secretary Board of Education of Clarksburg School District, for \$275,000 of 5 per cent. 10-30-year bonds; dated September 1, 1911; denomination \$1000.

Wm. F. Bockmiller, Pres. John G. Hullett, Sec.
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is what you demand of your depository, and is what we offer. We started 1869. We guarantee absolute safety for your principal, and will pay 4% in our Savings Department and 4% on Certificates of Deposit, both payable quarterly. Let us send printed matter.

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Company**

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Capital and Surplus - - \$1,200,000

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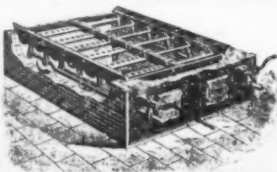
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Manufacturing sites in Savannah with railway track connections are obtainable at very reasonable prices. The class of labor is good, and with a mild climate their work can continue the year around to great advantage. Cheap electric power or fuel can be easily obtained.

**These Advertisements
Too Late for
Regular
Alphabetical Index**

Atwood Violett & Co.....	75
Brown, J. A.....	81
Conroy Mfg. Co.....	74
Cothran, Thos. W.....	78
Lybrand, J. W.....	78
Toulme, R. W.....	78
Treasury Department.....	78

The Glenmore Rocking and Dumping Grate



increases your Boiler capacity
from 12 to 15%.
It effects a saving of from 15
to 20% of fuel.
Write for particulars.

CONROY MANUFACTURING CO.
NORTH EAST, MARYLAND

W. Va., Logan.—Official: Bids will be received until 1 P. M. August 26 by J. P. Baer, City Attorney, for \$15,000 of 5 per cent. 10-30-year street-improvement bonds voted June 10, 1911; denomination \$500.

W. Va., Ripley.—Official: Bids will be received at the council chamber until 1 P. M. September 12 for \$11,000 of 5 per cent. 10-30-year water-works and sewerage bonds; denomination \$100. B. F. Rader is Mayor and V. L. Caston Recorder.

At Lexington, S. C., bids are being received for \$10,000 of 6 per cent. bonds of Lexington School District No. 1. Further particulars will be found in the advertising columns.

At Wagener, S. C., bids will be received until noon September 30 for \$8,000 of 6 per cent. 10-year bonds of District No. 60, Alken county. Further particulars will be found in the advertising columns.

At Tulsa, Okla., bids will be received until 5 P. M. September 12 for \$291,000 of 5 per cent. 20-year public-improvement bonds. Further particulars will be found in the advertising columns.

FINANCIAL NOTES.

The Bank of Crawford, at Crawford, Ga., has, it is reported, increased its capital from \$5,000 to \$50,000.

The People's Bank of Lewisburg, Tenn., will, it is reported, increase its capital from \$10,000 to \$50,000.

The Louisville Title Co., according to press dispatches, has filed amended articles of incorporation increasing its capital from \$250,000 to \$300,000.

The Commercial & Savings Bank and the Bank of Davidson, both at Lexington, N. C., have, according to press dispatches, consolidated under the name of the former institution.

Three Bales of Sea Island Cotton per Acre.

The announcement made in the MANUFACTURERS RECORD last week that Atwood Violet & Co., 20 Broad street, New York, a house which for 40 years has been intimately identified with the cotton trade

of the South in New Orleans and New York, is organizing a company to grow Sea Island cotton in Santo Domingo is one of the interesting illustrations of the efforts now being made to increase the world's supply of cotton. Prior to offering to receive subscriptions to the preferred stock of the company, Messrs. Atwood Violet & Co. had careful investigations made as to the property, its possibilities and all the legal requirements connected with the undertaking. They report that there will be no taxes on the property, that there are no boll-weevils in Santo Domingo and no insects injurious to cotton, and that, moreover, only one planting of the crop is necessary in four years, and perhaps five.

It is proposed to grow the finest grade of Sea Island cotton, and the yield is quoted at about three bales of lint per acre. Under such conditions the attractiveness of the proposition from an investment standpoint was so strong that it appealed to the judgment of such an old conservative house as that of Atwood Violet & Co. Preferred stock to the extent of \$100,000 is being offered for subscription, with a bonus of 100 per cent. in common stock.

Referring to this property, a letter issued by Atwood Violet & Co. says:

"The agricultural possibilities and timber resources of the property should prove a remunerative investment in the natural and gradual increase in the value of the property even without the cultivation of cotton, sugar or any other commodity."

Those who are interested as investors, or as students of economic conditions in studying the possibilities of cotton-growing in Santo Domingo and the improved business and financial situation in that country, can secure full information from Atwood Violet & Co.

Santo Domingo Planters Company

formed to cultivate on the Island of Santo Domingo

SEA ISLAND OR LONG STAPLE COTTON

which always commands a very great premium over average staple cotton of American growth, and has never been in adequate supply.

The subscribers to \$100,000 preferred 8% cumulative stock (\$10 per share par) will receive a bonus of \$100,000 common stock (\$10 per share par) and will control the company in every way for four years.

We have consented to act as Bankers for this Company. First, because of our long experience in the Cotton Markets—since 1869; Second, because of the great merits of this proposition; Third, because entire control of management is conceded to Subscribers.

Prospectus and all information in detail on application to

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Members N. Y. Stock Exchange.

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This Kelly Motor Truck Supplanted 14 Horses

Look at this picture—and then read this letter

E. H. SCOTT,
GENERAL TEAMING, MOVING OF HOUSEHOLD GOODS AND PIANOS.

Erle, Pa., May 4, 1911.

The Kelly Motor Truck Co., Springfield, Ohio:

Gentlemen—I am sending you a photograph showing my three-ton Kelly truck pulling trailer with full load, and would say that trailer weighs forty-one hundred pounds without load. I have been using this machine for the past few months hauling trailers, and find that same is most satisfactory. I am able to negotiate any grades here in Erle, pulling the trailer. I figure that it does the work of seven teams, and that I am able to save a considerable amount of time by the use of trailers. By the use of the Kelly truck and several trailers I have sold fourteen horses.

The machine has proved most satisfactory in every way and has never caused me any trouble to date. I am using my old wagons and have been put to no additional expense in converting them into trailers. The machine pulls a load equal to its own carrying capacity, loaded on trailers, without any trouble whatever. I am well pleased with the blower-cooled motor, and from my own experience I would not consider the purchase of any other make but the Kelly.

E. H. SCOTT.

Before you consider further the purchase of a motor truck, don't you think you ought to know all there is to know about the truck that brings forth a letter like this?

Don't you think you ought to know all about the truck that won the trophies for low operating cost in the great motor truck contests at Philadelphia, Boston and New York?

Don't you think you ought to know all about the exclusive Kelly (Frayser-Miller) Blower-cooled Motor—one of the chief reasons why Kelly Motor Trucks are showing the same superiority in every branch of industry—in your own line of business—that they showed in these great contests.

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fill in and mail to us today and we will send you full particulars of the work Kelly Trucks are doing in your own line of business.

Gentlemen:

Please send me complete details regarding Kelly Motor Trucks.

Name.....

Address.....

Kind of Business.....

The Kelly Motor Truck Co., 238 Burt St., Springfield, Ohio

TEAR OFF THIS COUPON

THE KELLY MOTOR TRUCK CO.

238 Burt St. Springfield, Ohio

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Classified Opportunities

MEN WANTED

WANTED—Responsible and experienced hardwood lumber man to take active part and some interest in hardwood lumber business. My holdings consist of 46,000 acres virgin hardwood and about 18,000 in pine in fee simple; also band mill, standard-gauge railroads, etc.; party must have at least \$10,000 cash; will bear the closest investigation; mill superintendent preferred; also other good men, bookkeeper, etc. Address No. 835, care Manufacturers Record.

WANTED—Traveling or local men; all sections of the country; profitable side line; commission or salary; good men average \$100 weekly. For particulars address The Sun Chemical Company, Richmond, Va.

SALESMEN—To sell high-grade driers and paint oil on commission basis. State territory. Address Box 135, Collinwood, Ohio.

LEATHER BELTING MANUFACTURERS of established reputation about to widen territory want salesman of record and experience in Central or Southern States; one whose trade is with jobbers preferred; good opening for the man who can deliver. Address "Belting," care Manufacturers Record.

WANTED—Real salesmen acquainted with building and contract work to handle concrete mixers. The American is a batch mixer giving a perfect mix either wet or dry. It is sold under a liberal commission arrangement without requiring any financial investment by the agent. A good seller in other sections and should prove attractive in the South with pushing. Address Cargill Mfg. Co., 567 Buttle Ave., Columbus, O.

AGENTS WANTED to sell lubricating oils, belts, hose, paint, varnish, to contractors, auto owners, mills, factories, etc. Exclusive territory to right party. Oil experience unnecessary. Manufacturers' Oil & Grease Co., Cleveland, Ohio.

A RICHMOND CORPORATION extensively marketing a production in use for seven years without competition, and a great seller, wants managers who can handle subagents; small investment necessary for exclusive rights to counties or whole States of Georgia, Tennessee, Virginia, Carolinas, Florida, Alabama, Louisiana, Texas. Proposition good for \$5000 to \$10,000 per year. Southern Spray Co., Richmond, Virginia.

SALES AGENTS to sell feed-water heaters, evaporators, condensers and other power-plant equipment; guaranteed territory; commission. Address Fisher, 90 West St., New York City.

WANTED—Thoroughly competent bookkeeper and office manager who can invest two or three thousand dollars in our business; have been established here eighteen years, well advertised, plenty of work and business growing; prefer Protestant Christian; must be a worker and know how to economize. Address No. 841, care Manufacturers Record.

AGENTS wanted in every city and town for best-selling automobile specialty; large demand for goods; success assured. Ray Specialty Co., Box No. 138, Petersburg, Va.

WANTED—High-grade experienced electrical supply salesman; give references, stating age, experience and salary expected. Address Jobber, P. O. Box 201, New Orleans, La.

WANTED—Superintendent and manager by a new company just organizing in the South to manufacture church furniture; a competent man familiar with this line of business and able to invest some capital, having ability to take entire charge of the business. The company has ample capital, with buildings and machinery ready for operation. Address Southern Church Furniture Co., care of Manufacturers Record, Baltimore, Md.

WANTED—Manager and superintendent for ice plant and bottling works. Party having an established business in one town desires to avail himself of opportunity to purchase an ice plant and bottling works in another town, which is best town Northeast Oklahoma; town and business growing fast; paying 20 per cent. interest on investment; want man of ability who can invest \$5000 and services to take charge of plant; good salary and excellent opportunity for right man. M. C. Harper, Miami, Oklahoma.

INTEREST IN TRUNK FACTORY will be sold to right party with \$5000 to put into the business. Net profits 25 per cent. Plant consists of two-story building with a shed; machinery for planing and preparing the timber driven by steam-power. Lumber used is buckeye, poplar, linn, oak, ash and chestnut. Output now two to five dozen trunks per day. Sold with all discounts off for \$7.00 each. Location one of the best in the Southeast, on Southern Railway. Fine opportunity for investment of capital. For further information refer to File No. 2226 and address M. V. Richards, Land and Industrial Agent, Southern Railway, 1375 Pennsylvania Avenue, Washington, D. C., or T. R. Thackston, Agent Land and Industrial Department, Southern Railway, Bristol, Tenn.

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WANTED—Agency for novelties in hardware special machinery, tools, wrenches, etc. Success Novelty Co., Inc., Richmond, Va.

MANUFACTURERS' AGENT would like one or more accounts in the building trade in Baltimore and Washington. Address No. 840, care Manufacturers Record.

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 24 lines. Allow seven words per line. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year, as follows: 100 lines, 18c. per line; 300 lines 16c. per line; 500 lines or more, 15c. per line.

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INDUSTRIOUS, ambitious young man desires position as traveling representative on sales or contract proposition. Address "Experienced," care of P. O. Box No. 108, Charlotte, N. C.

WANTED—Connection with responsible corporation (mining or manufacturing preferred) as secretary, treasurer, office manager or auditor by gentleman with extensive experience and highest references; open for engagement October 1. Address No. 832, care Manufacturers Record.

HIGH-GRADE highway engineer experienced in latest methods wants position with county proposing construction of good roads; present work finishes in September. Further information upon request to those interested. Address No. 838, care Manufacturers Record.

WANTED—An experienced double-entry bookkeeper will be ready for an engagement soon; best of references. Address No. 843, care Manufacturers Record.

MUNICIPAL ENGINEER, college and university technical education, M. Am. Soc. C. E., thoroughly experienced in design and construction of water-works, sewerage system, streets and pavements, bridges, concrete and other masonry, and in the development of suburban properties, parks, estates, etc., desires responsible position with a city, consulting engineer or contracting firm; best of references cheerfully furnished. Address No. 836, care Manufacturers Record.

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COMMERCIAL ATTORNEY—Collections, credit ratings and special reports furnished anywhere in Tennessee, Georgia or Alabama. Careful attention given to interests of out-of-town clients. Reference, any bank in Chattanooga. Allen Hiltzfeld, Attorney-at-law, Suite 915 Hamilton National Bank Building, Chattanooga, Tenn.

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RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.—Courses in Civil, Mechanical and Electrical Engineering, and General Science, leading to the degrees of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), and Bachelor of Science (B.S.). Special courses in engineering and science. Splendidly equipped new engineering laboratories. Send for catalogues to Registrar.

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THE PALMETTO NATIONAL BANK, Columbia, S. C., capital \$250,000, solicits accounts of banks, firms, corporations and individuals, either commercial or savings accounts.

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HOTEL FOR SALE—One of the finest hotels on the Galveston Beach, consisting of 20 rooms, with modern conveniences; all car lines pass the hotel; one block from the popular bathhouses; surrounded by all the beach amusements. This hotel faces the Gulf of Mexico, located on the Galveston beautiful boulevard, has an elevation of 22 feet above the gulf, has the reputation all over the State of Texas as one of the best hotels in Galveston. Here is an opportunity for a good hotel man. Galveston Beach is growing more popular every year. Write for further particulars. J. L. Boddeker & Co., Agents, 410 20th St., Galveston, Texas.

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WILL GIVE reputable parties to join me in further developing finest mineral spring in Florida. Government analysis water, two hundred acres land with \$20,000 improvements, unincumbered; a bargain for assistance. Address Box 66, Ocala, Florida.

LOT SALES—If you own land adjoining a thriving city, lay out a subdivision and let us sell the lots. Our red tag plan is the biggest kind of a money-getter. We want to handle a few more sales yet this season, and take this method of getting in direct touch with owners of sub-division property throughout the country. For terms and full particulars address Tom Magruder, Gen. Mgr., Evansville, Ind., 534 Jefferson Ave.

TURPENTINE—We hold thirty years' lease under official sanction on three million acres turpentine pine in Mexico; solid body; annual rental \$7500. Will take stock in full consideration in company composed of reliable naval stores operators, organized to take over the lease and exploit property, or act as holding company for purpose of subletting. Full details to earnest inquirers with financial standing. The C. E. Way Land Co., Suite 514 Frost Building, San Antonio, Texas.

MANUFACTURERS producing articles of merit suitable for the mail-order trade will please send information and catalogues to Box 41, Jacksonville, Fla.

WANTED—To correspond with manufacturers of specialties who can manufacture a new lock. Address J. C. Lador, Chattanooga, Tenn.

INVESTMENTS—FARMING—HOUSTON—YOUR OWN WELFARE—If you are interested in either of these, kindly send ten cents for a copy of the Practical Farmer. It will astonish you. It will give you pointers on the best, safest and easiest investment in the United States today. H. S. Taylor, Scanlan Bldg., Houston, Texas.

FACTORIES LOCATED, factory buildings in the principal cities to rent, factories, saw-mills, flour mills, warehouses, real and personal property sold or exchanged. Timber, grazing and farm lands sold or exchanged. Properties cared for, rents collected. Office space, desk rooms and Chicago addresses arranged for. High-class manufacturing stocks and bonds for sale and exchange. Offer what you wish to sell, inquire for what you wish to buy. Negotiations confidential. Business promptly executed. Correspondence invited. Kreis & Company, 167 W. Washington street, Chicago, Ill.

MAPS AND BLUE PRINTS

MAPS OF TEXAS COUNTIES—We make blueprint maps of nearly all Texas counties and several Louisiana parishes. Write for prices on those desired. Singleton Bryan & Co., Beaumont, Texas.

FACTORY SITES

FREE SITES and other liberal assistance; cheap fuel; natural gas, oil, coal and abundant water; six railroads. Address Chamber of Commerce, Wichita Falls, Texas.

TYPEWRITERS

IF you are interested in purchasing a high-grade typewriter and do not care to invest \$100 asked by the manufacturer, we would like you to investigate our remanufactured machines. Enterprise Exchange, Inc., 609 E. Baltimore St., Baltimore, Maryland.

NEW LOCATION WANTED

AN EASTERN BRIDGE FACTORY, thousand tons capacity yearly, employing average 100 men, desires Southern or Southwestern location; wants to add to present equipment heavy machinery for building dirt-moving machinery; will ask some investment by local capital. Address Box No. 65, Salix, Iowa.

INDUSTRIES WANTED

MISCELLANEOUS

CLEVELAND, TENN., WANTS YOU—The best town in the Southeast, with a hydro-electric development of 32,000 initial horsepower for manufacturing purposes, final development 82,000 horsepower. Free manufacturing sites; exemption from city and county taxes; ample railroad facilities; spring water pumped to all parts of the city; cheap raw materials; 186 miles of pike roads in county; fine farming and trucking section; best of public utilities; cheap white labor; cheap power; ideal location for cotton mill, furniture factory and brick-manufacturing plant; good climate; most rapidly developing city in the Southeast. Write Commercial Club, Cleveland, Tennessee.

WANTED—Factories to locate in the heart of the great Southwestern coal district. An abundance of coal and water and good railroad facilities. In addition to this we have about four million feet of hardwood lumber. We also have deposits of shale and clay in abundance, suitable for fine brick and pottery, and a small test kiln ready for operation. None too small or too large. Can interest all with inducements we have to offer. Write to Hartshorne Industrial Club, Hartshorne, Oklahoma.

SUFFOLK—The best manufacturing and distributing point in Virginia; six railroads and water transportation; plenty of labor; cheap fuel; electric power; seventy manufacturing plants in successful operation; opportunity for furniture and woodworking plants and any wholesale, jobbing or manufacturing business; center of tidewater; richest farming section to be found; healthy; excellent schools and churches; filtered water, gas and sewer. Write Board of Trade, Suffolk, Va.

KISSIMMEE, FLORIDA, has developed and is building by leaps and bounds. Population doubled in eighteen months. Invites factories and wants especially—
A Machine Shop,
A Furniture Factory,
A Barrel Factory,
A Broom Factory,
A Cigar Factory.
Board of Trade, Kissimmee, Florida.

"BUSIEST AND BEST BUILT CITY IN TEXAS"—Wichita Falls possesses unsurpassed natural resources and advantages. Offers exceptional opportunities for investors; free sites for manufacturing establishments; cheap fuel; natural gas, oil, coal, electricity and abundant water from the largest body of water in Texas; six railroads; raw material at hand; latest approved public utilities; crescent wood block pavement throughout business section; over fifty miles concrete sidewalks. Most rapidly developing city in Southwest. Handsome booklet and detailed information upon request. Address Chamber of Commerce, Wichita Falls, Texas.

VICTORIA, TEXAS, head of navigation of Gaudalupe River; center of cotton, corn, truck and citrus fruit-growing district of South Texas; country rapidly developing; opportunities for many industries. If interested in the coastal section of Texas, write for booklet "D" to the Secretary of the Progressive League.

ASHEVILLE, N. C.—Delightful all-year-round climate; center of hardwood forests of Southeast; abundant hydro-electric power; 31,000 population; 40 miles paved streets; cheap, reliable labor; wants spoke and handle factory; furniture factory; wagon factory. Also wants man with some capital to invest in established manufacturing enterprise with services. Write Board of Trade, Asheville, N. C.

MILLEDGEVILLE, GA., with its inexhaustible supply of hardwood and kaolin, central location, low freight rates, excellent transportation facilities and ideal climate, offers unusual opportunities for manufacturing industries of all kinds. Before locating elsewhere write Young Men's Business League.

INDUSTRIAL PLANTS FOR SALE

BRICK PLANT FOR SALE—Modern, up-to-date brick plant in Georgia, now in operation, making 25,000 common building brick per day; only one in this locality; complete set of grinding machinery, 75 H. P. engine, steam drier, plenty of clay, labor, wood, etc.; best of reasons for selling; good proposition for a live man who can give it his time. Address No. 806, care Manufacturers Record.

ELECTRIC LIGHT AND POWER PLANT for sale, consisting of one 11x10 ideal engine, with D. C. 40 K. W. Westinghouse generator; one 11x12 ideal engine, with D. C. 50 K. W. Westinghouse generator; battery of two 20 H. P. return tubular boilers, pumps, heaters, etc.; all in first-class condition; can be seen at the Title Guarantee Building, Birmingham, Ala., where it will be in daily use until October 1 next. An opportunity for securing a first-class plant cheap. Address Title Guarantee Loan & Trust Co., Birmingham, Ala.

MINERAL AND TIMBER LANDS WATER POWERS AND MISCELLANEOUS PROPERTIES

CEMENT LAND FOR SALE—150 acres; one mile of R. R. station; running water; 50 acres of cement rock from 300 to 800 feet deep; cement has been tested and analyzed. John M. Piper, Greenville, Tenn.

FOR SALE—A block of improved brick store property; pays eight per cent. on improvement; two dwellings on same; a farmers' town of twenty-five hundred population; good schools, city water and lights; crop surplus. Write for particulars. Address "J.," No. 116 N. 11th St., Gadsden, Ala.

\$50,000,000 IN THREE YEARS—Invest in Washington real estate. As the nation grows so must its capital city develop. The increased value of Washington real estate in the past three years was approximately \$50,000,000. Did a portion of this represent your profits? We are now placing on the market one of the best-located subdivisions in the choice northwest section, fronting one mile on Sixteenth street, and overlooking the National Rock Creek Park. The future of this section will make this the best investment in the suburbs of the national capital. For plat and full information apply to Robert E. Heater, 412-413 Colorado Building, Washington, D. C.

FACTORY SITES, Business Property, Residences and Farms. If interested in the metropolises of the Southwest or its territory, write for free land list and booklet on Houston, Texas (where 17 railroads meet the sea), or make your wants known. Bank references if desired. Central Land Co., 303 Theater Bldg., Houston, Texas.

WRITE HELBERG & BLAIR, 415 Roberts-Banner Bldg., El Paso, Texas, for information about business opportunities of all kinds and investments in town lots in the new town of Columbus, situated in the wonderful Lower Mimbres Valley, New Mexico, 74 miles west of El Paso, on the El Paso & Southwestern R. R. Pure soft shallow water for irrigation. Free Government land. Patented land at from \$15 to \$25 per acre.

SHIP CHANNEL FRONTAGE—1800 acres fine black prairie land between Houston and the bay, fronting 1 1/2 miles on Houston Ship Channel; small amount of beautiful timber along water frontage; high banks; Southern Pacific Railroad and Houston-Bay Shore shell road through south edge of property; railroad station on land; high and well drained; beautiful factory or residence townsite; strictly first class in every particular. Address Dr. C. S. Preston, 1007 Scanlan Bldg., Houston, Texas.

Classified Opportunities

MINERAL LAND FOR SALE

WE ARE IN CONTROL, fee delivery (titles perfect), of large boundaries in Tennessee coal, iron and mineral belt. Surveys 75,000 to 90,000 acres, convenient to transportation, having on it and near all the raw material needed for manufacturing purposes, good bituminous, domestic and coke-making coal; veins show large average tonnage per acre and easy mining out, and abundance of high-grade iron ores. These valuable holdings can be delivered at comparatively low figures, one-half of what it is in reality now worth, to genuine buyers who can show ratings or bank references to warrant the ability to promptly take over these lands. None but principals need reply. Open bargain to direct buyers. Address J. C. Lindley, Greensboro, N. C.

COAL LAND FOR SALE

COAL LAND.—Great bargain in large tract, Southeastern Kentucky; sound titles; thick beds; high quality; transportation. Address Room 908, 95 Liberty St., New York.

TIMBER LAND FOR SALE

FOR SALE.—At \$12 per acre, twenty-one thousand acres of hardwood timber land in Louisiana; scales ten thousand feet per acre. Address W. C. Brown, Heber Springs, Ark.

FOR SALE.—10,000 acres yellow pine saw-mill timber in South Georgia; well connected up; will cut 4500 feet per acre; beginning at railroad and extending ten miles. Price \$9 per acre; some terms. Apply J. R. Monroe, Abbeville, Ga.

TIMBER—TIMBER—TIMBER.—Several million acres throughout North America. We offer special opportunities to manufacturers and investors, in tracts of any size, whether for immediate or future use. Timber is going fast. Let us tell you about it in time. Parker Land & Timber Agency, Charlotte, N. C.

FOR SALE.—33,000 acres of timber and land in Ark. at \$10 per acre. Will cut 5000 feet per acre of hardwood.

10,000 acres on Ouachita and Saline Rivers in Ark. Will cut 10,000 feet per acre; 45 per cent. white oak. Price \$15 per acre.

80,000 acres in Ark.; 65 per cent. oak. Terms on this to suit. Price \$12.50 per acre. 19,000 acres in Northern La. 6000 feet per acre; 50 per cent. white oak. Price \$15 per acre. Write me for full particulars. J. B. Hamner, No. 80 Madison Ave., Memphis, Tenn.

CUT-OVER TIMBER LANDS

4000 ACRES level rich cut-over timber land, \$5 per acre. 14,750 acres cut-over timber hill land, \$3.85 acre. Robert T. Sessions, Winthrop, Ark.

CUT-OVER TIMBER TRACTS

50,000 acres cut-over pine lands, Miss. \$6.50
20,000 acres cut-over pine lands, La. 6.00
75,000 acres cut-over pine lands, Tex. 5.00
15,000 acres cut-over hardwoods, La. 4.50
Marsh Lands for Reclamation.

00,000 acres in a body, Gulf Coast of La. 3.00
Timber Lands.
20,000 acres L. L. Y. pine, Fla., cut 3500 ft. 7.00
15,000 acres L. L. Y. pine, Ala., cut 7000 ft. 21.00
30,000 acres hardwood, cut 10,000 ft. (60% red gum) 10.00
Finest red gum proposition South.
Wm. R. Taylor, 508 Perrin Bldg., New Orleans, La.

TIMBER FOR SALE

FOR SALE.—THE FINEST LONG-LEAF PINE TIMBER IN GEORGIA.—Very large and long; nothing under 14" diameter at stump will be sold; tract contains 2264 acres and will cut 19,000,000 feet; only 3 miles from railroad; easily logged; high, dry and healthy; low freight rate into Savannah. If you want large and long heart timbers, this is the place to find them. Will bear closest investigation. We own this timber and will sell at reasonable price. Address No. 335, care Manufacturers Record.

MINERAL AND TIMBER LANDS

FOR SALE.—400-acre tract magnetic iron ore land on line N. & W. and Virginia Rys.; wide vein ore will yield 60 per cent. metallic iron. 5000 acres timber on transportation in West Virginia. 4000 acres Pocahontas coal land. J. C. Sullivan, Beury, Fayette Co., W. Va.

FARM AND TIMBER LANDS

FOR SALE.—Large and small plantations in the rich Red River Valley, cheap and on easy terms; also large tract of hardwood. Apply to E. J. Iles, Alexandria, Louisiana.

GEORGIA FARM LAND FOR SALE.—I own in fee simple, titles perfect, 9781 acres of fertile farm land, lying along two trunk-line railroads for seven miles and within 33 miles of Savannah, Georgia. On this land is a good stand of yellow pine, estimated to cut 20,000,000 feet, with thousands of cords of firewood, posts, ties and other small timber. Also good 8-room house, a barn that cannot be duplicated for \$1000, store building and other houses, with railroad station, stores and church on the property. Low transportation rates by reason of water competitive rates prevailing at Savannah, giving prompt shipping facilities to Northern markets for vegetables and fruit, with excellent market at home the year round. Healthy location, good water, and nothing better in Georgia as a colonization proposition. Will not divide tract, but with financially able parties will trade outright, or put in property and take interest in development of same. For price and terms and further particulars address W. W. Robertson, Norfolk, Va.

FARMS AND TIMBER LANDS in Eastern Arkansas, the best part of the best State in the Sunny South. Grant Green, Helena, Ark.

I HAVE BARGAINS IN TIMBER TRACTS, large colonization propositions, cut-over lands and reclamation tracts in any size wanted up to 150,000 acres from \$2.50 per acre up.
Wm. R. Taylor, Land and Timber Investments, 508 Perrin Building, New Orleans, La. Established 1898. Sales over \$6,000,000.

COLONIZATION LANDS

FOR SALE.—16,000 acres, Gonzales county; 90 per cent. tillable; highly improved; 20 artesian wells; 50 houses; 3300 acres cultivated; ideal colonization proposition; \$20 acre; one-third cash; balance easy, 6 per cent. Box 368, Coleman, Texas.

BEST COLONIZATION PROPOSITION IN THE SOUTH.—50,000 acres cut-over pine lands for sale cheap, on reasonable terms; good soil, high, well drained and healthful; in one of the most progressive sections in Mississippi; two trunk-line railroads and near rapidly-growing towns; must be sold in its entirety. Address Owner, Box 4, Jackson, Miss.

20,000 ACRES of well-drained alluvial land in Point Coupee parish, La., one-half of which is good hardwood timber land; two railroads cross the property; this is a very attractive colonization proposition; \$15 per acre. 50,000 acres of land in parishes of Iberville and St. Martin; \$5 per acre if taken at once; an exceptional bargain. Write for particulars. E. L. Page, 618 Whitney-Central Bldg., New Orleans, La.

TRACT FOR COLONIZATION.—12,000 acres in Lavaca and Jackson counties, Texas; 95 per cent. tillable; black waxy and black sandy land. On both sides of Lavaca River. Numerous settlements and good wells of water on tract; all subdivided and ready for colonizing. Will give good terms on this tract. Emil Locke, No. 712-13 Gibbs Bldg., San Antonio, Tex.

HOME AND FARM DEVELOPMENT LANDS.—27,000 acres of land in North Carolina, well adapted to colonization purposes or to development as a farming proposition. Lies on both sides of the S. A. L. Ry. Contains large area of famous Hoffman sandy loam type of soil, which readily responds to intensive methods of cultivation and returns enormous yields of cotton, corn and truck. 98 per cent. can be brought into cultivation. Fine water and healthful climate. Address W. P. McKee, Rockingham, N. C., or P. C. Whitlock, Charlotte, N. C.

FARM, FRUIT AND TRUCK LANDS

ALABAMA

FOR SALE.—Twenty acres of brick clay and truck farming land; seven points shipping advantages; seventeen thousand population of people combined in three growing towns; clay tested; demands good for brick; best opportunity for the price in Alabama. Address "J.," No. 116 N. 11th St., Gadsden, Ala.

ARKANSAS

WE ARE OFFERING some of the best cotton plantations in Arkansas at \$50 an acre. Polk Real Estate Co., Little Rock, Ark.

FLORIDA

FLORIDA FRUIT AND TRUCK LANDS.—We offer 10-acre tracts in that part of the State of Florida lying in Hillsboro county and Lake Butler region, in the Pinellas peninsula, on the west coast of Florida, on the Gulf of Mexico; with its elevation and rolling hills is especially suited for fruits of all kinds—grapefruit, oranges, grapes, dates, figs, bananas, peaches and other fruits, as well as vegetables, potatoes, corn, beans, peanuts and all the varieties that can be produced anywhere. The Tarpon Springs district offers the most favorable conditions for farmer, home seeker and investor. Fertile lands in small tracts, easy monthly payments; guaranteed title. Investigation invited. If you want a bargain and home in the most desirable part of Florida, write now for particulars and reservation. Tampa & Tarpon Springs Land Co., Tampa, Florida.

FLORIDA FARMS ARE FORTUNES.—Our soil similar to fertile sections Iowa, Missouri; easy-payment plan. Write for booklet. Milton Land & Investment Co., Marianna, Fla.

WHY PALMETTO LEADS.—The 800,000 boxes of fruits and early vegetables attests the superiority of soil, climate and irrigation necessary to produce such crops. The ease with which such crops are handled by rail and water make it an ideal place for fruit and vegetable growing. The Manatee River, Terra Cina and Tampa bays furnish ideal salt-water fishing, boating and bathing. For further information address The Manatee River Board of Trade, Palmetto, Florida.

FLORIDA LANDS AT WHOLESALE.—19,672 acres, Lee county, \$6; 67,000 acres, St. Lucie county, \$5; 111,360 acres, extreme southern Florida, \$3.25. Terms reasonable. Tanager Land Co., Cedar Rapids, Iowa.

GEORGIA

FOR SALE.—200-acre farm, 60 acres in cultivation; two good settlements; to go at a bargain. For prices and terms write J. H. Cason, Crosland, Ga.

TWO FARMS in fertile Georgia; prices reasonable; containing 589 and 405 acres; good cotton and corn land. \$8000 stock of general merchandise cheap. Write R. H. Warren, Louisville, Jefferson Co., Ga.

2900 acres extra fine productive land in Sumter county, Georgia, 3 miles from railroad station; extra well improved in every way; 1500 acres in high state of cultivation; most of the lands level; a large per cent. of this land producing a bale of cotton per acre; 30 extra good mules, 20 head of cattle, about 40 head of hogs, all farming implements and feed stuff raised on the place this year. Price \$65,000; good terms.

735 acres extra fine land, red and gray land with clay subsoil, lying well, 4 miles from Americus, Georgia; 500 acres in cultivation; on good road. Price \$40 per acre; easy terms. 168 acres, 10 miles from Americus, Georgia; fine productive lands with clay subsoil; two good seven-room dwellings; three tenant-houses; in good community. Price \$5300.

We have 150 farms of various kinds and sizes for sale. Will finance any purchase made through us. Southern Land Company of Americus, Georgia.

LOUISIANA

EIGHT HUNDRED ACRES IN PECANS. Furnish the money to work them into an orchard and I will give you a one-half interest. Worked now, and in ten years 'twill be worth \$1000 per acre. Write me. J. S. Dixon, Fowhatan, La.

MEXICO

25,000 ACRES, Coahuila, Mexico; water plenty; good pasture; soil rich; produces corn, wheat, cotton, variety of fruits; per acre, 79c. Advertise bargains only. A. L. Hodge, Dallas, Tex.

NORTH CAROLINA

FARM FOR PROFIT in Eastern North Carolina, the "Nation's Garden Spot." Leads other localities for vegetables, fruits and staple farming on small capital. Homeseekers and investors, write Carolina Trucking Development Co., 815 Southern Bldg., Wilmington, N. C.

OKLAHOMA

3200 ACRES, 100 per cent. agricultural land, one body, in arid district, South Texas; \$5.50 per acre bonus; must sell. Address Oliver Stofer, Snyder, Okla.

TENNESSEE

TENNESSEE VALLEY FARM.—800-acre corn and cotton farm, one mile from rapidly-growing town; 150 acres in cultivation; balance in woods and pasture; one-half mile along pike; fine dwelling and barn; well fenced and plenty of tenant-houses; well watered. This is an ideal place for general farming or for stock raising. On Southern R. R. Price, \$31.25 per acre; one-fourth cash; balance one, two and three years. Write for description and prices of other farms. Madison Land & Trust Co., Madison, Ala.

TEXAS

PECOS PALISADES LANDS.—Ranch and irrigated lands in lower Pecos Valley. S. L. Estes, 405 North Texas Building, Dallas, Texas.

JAS. GOODE REAL ESTATE CO., ranch and irrigated lands. Office, Orient Hotel, Pecos, Tex.

TEXAS LAND FOR SALE.—If you want black land farms or colonization proposition, write me now. Remember, I pay your railroad fare if you buy from me. J. H. Russell, Abilene, Taylor county, Texas.

155 ACRES in Eastland county, Texas, on T. & P. R. R.; 75 acres in cultivation; fine pecan orchard; running water in creek; one mile of settlement; improvements are old; fine grass for grazing. This is good land for farming purposes and very cheap at \$25 per acre. Louis C. Wise & Son, Abilene, Texas.

IRRIGATED LANDS.—Parties in the North, East and Middle West interested in improved and unimproved irrigated lands and ranch property in the great Pecos section, communicate with us. Pawkett & Davis, Pecos, Tex.

FOR SALE.—9895 acres of land, Culberson county, Texas, all tillable except 400 acres; fenced; watered; two houses; three miles station on Texas & Pacific Railway; good ranch for colonization proposition; at \$5 per acre. C. Collins, 1513 Main St., Dallas, Tex.

IRRIGATED FARM.—350 acres of rich sandy loam, level, and to be irrigated from the famous Elephant Butte Dam, now in course of construction. This land can now be bought for \$35 an acre. Write us for full description. Loomis Bros., El Paso, Texas, Mexican Timber Lands.

FOR SALE.—255½ acres prairie land, located on Santa Fe Railroad and on public road (shelled) only 13 miles from Beaumont and one-quarter mile from Fannett; suitable for general farming or for subdividing into smaller tracts. Title perfect. Price \$27.50 per acre. Also other lands suitable for subdivision. Texas Realty Co., Beaumont, Texas.

SOUTH TEXAS ORANGE, FIG, POTATO, CORN AND COTTON LAND.—We offer 254 acres of the best improved potato, corn and cotton land in South Texas, near Houston, for \$30 per acre. Will sell for \$200 per acre inside of five years. This land will pay a big dividend on that price now.

1700 acres, all prairie, orange, fig and garden land, perfect drainage, between Houston and Galveston. Will sell as a whole or in 10-acre tracts, or as much as you can handle, on very easy terms. Send for our literature and let us know what else tract of land you wish to buy. L. Bryan & Co., Houston, Tex.

IN THE HEART OF THE GREATEST DEVELOPMENTS.—1280 acres rich dark sandy loam, very deep, clay subsoil, in Dimmit county, in the "proven artesian belt" of Southwest Texas. Big flowing wells on adjoining properties. This land is near the famous Cross Ranch; adjoining lands selling \$40 to \$60 per acre. For quick sale, \$27.50; on terms. Eagle Bros., 412 Gibbs Bldg., San Antonio, Tex.

FIFTEEN HUNDRED-ACRE RANCH, three miles of Godley, Johnson county, Tex; three hundred acres in cultivation; balance pasture; 45000 worth of improvements, including three good barns; all fenced and cross-fenced; partly hog-fenced; lays on good pike road, and plenty of running water. Real bargain at \$20 per acre; one-half cash; balance on easy terms. Other black land farms in large and small tracts. Chas. G. Cloud, 1101 Main St., Dallas, Tex.

YOU SHOULD JOIN US in owning a Texas Bermuda onion farm. We are developing 500 acres of the best onion land in Texas. 3 acres of our land made \$1800 profit. Co-operation with us means wealth. You cannot lose. All land irrigated from artesian wells. No water troubles. One hundred acres in each farm. 100 shares per farm. \$150 per share, monthly payments of \$5 per acre. Let us send you particulars. Zavala Onion Farms Company, Gibbs Building, San Antonio, Texas.

THE RIO VALLEY WINTER GARDENS, La Salle county, Southwest Texas, a colony of 100,000 acres level rich black sandy loam in famous artesian belt; grow oranges, figs, Bermuda onions. We are opening Fowlerton, a new town on new railroad in heart of the colony. Guaranteed improvements on town-site. A 10-acre farm and free residence lot on terms of \$15 cash; balance \$10 monthly. Write for booklet A, prices, plats, etc. Fowler Brothers Land Co., Frost Building, San Antonio, Texas.

GREATER HOUSTON (Population over 100,000).—Just twelve miles out on Main street (Houston's \$200,000,000 thoroughfare) is located North Houston Gardens; 19-acre tracts only \$500; terms, \$25 cash, balance \$15 per month, no interest; five-acre tracts, \$400; terms \$15 cash, balance \$7.50 per month, no interest; 142-acre improved farm 50 miles from Houston, price \$25 per acre. H. S. Taylor, Scanlan Bldg., Houston, Texas, Member Houston Real Estate Exchange and the Texas Realty Association.

FOR SALE.—Farm at Arcadia, Texas, consisting of five acres and five-room cottage, large barn, chicken-houses, fine well, also large tank for rain water; all improvements in good condition. This land will grow anything. It is fine orange land; has some orange trees on it. Arcadia is 15 miles from Galveston, on the Gulf, Colorado and Santa Fe Railroad, and a growing town. The climate is delightful and healthy. This place can be bought at bargain. J. L. Boddeker & Co., Agents, 410 29th St., Galveston, Texas.

7000 ACRES of the best valley land along the Rio Grande River just south of Fort Hancock, Texas, lying altogether in the river bottom and being one league wide from the river to the foothills and two leagues long to the river front. There is a concession from the Mexican Government giving the owner free water, and by constructing ditches the whole tract can be irrigated. There is good ranch-house, well and laborers' quarters. Water can be had at from ten to thirty feet all over the tract. Wheat produced from 40 to 60 bushels to the acre. There is not a better bargain for a farming proposition in the Rio Grande Valley. This can be bought for \$10 at the present time. Address Henry, Cass & Fry, 30 City National Bank Bldg., El Paso, Texas.

VIRGINIA AND MARYLAND

VIRGINIA AND MARYLAND high-class water-front property on the famous Eastern Shore of Maryland, also on the Chesapeake Bay in Virginia, and farms in all the Piedmont section; many bearing commercial apple orchards in the mountains of Virginia. Send for S. S. Southern Farm Agency, 721 Main St., Lynchburg, Va.

FARMS—VIRGINIA AND MARYLAND.—Superb colonial estates; tidewater properties; agencies at all important points. Ashbridge Realty Co., Washington, D. C.

STREET CAR FOR SALE

FOR SALE.—One \$5000 No. 19 Fairbanks-Morse gasoline street car, with especially constructed body; far superior to regular style; standard gauge; perfect condition. Laurel Park Street Railroad Co., Hendersonville, North Carolina.

FOUNDRY WORK TO LET

FOUNDRY WORK TO LET.—Advertiser has profitable work for foundry and machine shop. Address, for full particulars, No. 842, care Manufacturers Record.

MACHINERY AND SUPPLIES

WANTED.—Every consumer in the Southwest to know that the Texas Rolling Mill Company of Fort Worth, Texas, manufactures track spikes, track bolts, machine bolts and nuts; also standard sizes of bar iron. One hundred tons always in stock. Prompt shipments our specialty. Satisfaction guaranteed.

PROPOSALS

PUBLIC BUILDINGS.

CONSTRUCTION BONDS

MISCELLANEOUS.

NEW BOND OFFERINGS

Bids for Lexington School District No. 1 Bonds of South Carolina

Bids for \$10,000 School District Bond Issue, bearing interest at rate of 6 per cent., will be received by Board of Trustees of Lexington School District No. 1 of South Carolina until 12 o'clock noon September 25, 1911.

All proposals must be sealed and addressed to J. P. MEETZE, Chairman, Lexington, S. C. (Signed) T. P. MEETZE, Chairman; KARL F. OSWALD, Secy.; S. M. GROSS, Treas.

\$291,000.00 City of Tulsa (Oklahoma) 5% Bonds

Sealed proposals will be received at the office of the City Auditor, Tulsa, Oklahoma, until 9:30 A. M. September 12, 1911, and thereafter opened at a meeting of the Board of Commissioners to be held in the Commission chambers at 9:30 o'clock A. M. September 12, 1911, for the purchase of \$291,000 bonds of said city, with accrued interest to date of payment therefor, as follows:

- \$50,000 00 Water-works Bonds, numbered 1 to 50, both inclusive.
- \$100,000 00 Sewer Bonds, numbered 1 to 100, both inclusive.
- \$50,000 00 Central Fire Station Bonds, numbered 1 to 50, both inclusive.
- \$23,000 00 Street Improvement Bonds, numbered 1 to 23, both inclusive.
- \$7,000 00 Public Library Site Bonds, numbered 1 to 7, both inclusive.
- \$11,000 00 Paving Bonds, numbered 1 to 11, both inclusive.

Said bonds to be 5 per cent. semi-annual interest-bearing coupon bonds, dated September 1, 1911, and maturing September 1, 1931, without option of prior payment, to be issued in denominations of \$1000 each and numbered as above mentioned; both principal and interest payable in lawful money of the United States at the Fiscal Agency of the State of Oklahoma in the city and State of New York.

The successful bidder must, without unnecessary delay, furnish, without expense to the city, blank bonds in the usual and customary form, acceptable to the Board of Commissioners.

All proposals must be accompanied by a certified check on some solvent bank, banking-house or trust company in the sum of 5 per cent. of the issue for which bid is made, as required by City Charter, to be forfeited to the city of Tulsa in the case of failure of such purchaser to comply with the terms of his proposal. The successful bidder must satisfy himself as to the legality of the issue without unnecessary delay.

For further particulars apply to the City Auditor, Tulsa, Okla.

The Board of Commissioners reserves the right to reject any and all bids.

Dated at Tulsa, Oklahoma, this 21st day of August, 1911.

E. B. CLINE,
City Auditor.

PAVING

Notice of Letting Contract to Construct Roads

Sealed bids will be opened on September 5, 1911, at the office of the Chancery Clerk of Monroe county, Aberdeen, Miss., for construction of 43 miles of public highways of Monroe county, Miss. Approximate quantities as follows:

- Grading, 135,649 cubic yards.
- Concrete, 2351 cubic yards.
- 12" pipe, 268 feet.
- 18" pipe, 420 feet.
- 24" pipe, 942 feet.
- 36" pipe, 756 feet.

Each bid, as an evidence of good faith, must be accompanied with a certified check of \$1000, payable to the order of Wm. H. Carlisle.

Sidewalks, Driveways, Gutters, Curbing and Cast-Iron Drain Pipe

NOTICE TO CONTRACTORS.
Paducah, Ky., August 15, 1911.

The Board of Public Works will receive sealed bids until 10 o'clock A. M. September 5, 1911, for the construction of concrete sidewalks, concrete driveways, concrete gutters, granite curbing, and cast-iron drain pipe.

Approximate quantities as follows:

- Concrete Sidewalks.....30,387 sq. ft.
- Concrete Driveways.....2096 sq. ft.
- Concrete Gutters.....4928 ft.
- Granite Curbing.....5133 ft.
- Cast-Iron Drain Pipe.....1146 ft.

Each bid must be accompanied with a certified check for fifty dollars (\$50), payable to E. J. Paxton, Treasurer, to be forfeited to the City of Paducah upon failure of the successful bidder to enter into contract in accordance with his proposal. There will also be required of the successful bidder a construction bond for fifty per cent. (50%) of his bid; and after the work is completed and accepted, a maintenance bond of twenty-five per cent. (25%) of the contract will be required for a period of five (5) years.

Plans and specifications can be obtained by addressing the undersigned.

L. A. WASHINGTON,
City Engineer.

PUBLIC BUILDINGS

Reconstructing Jail

Bids for remodeling the old jail, and putting in new cell work, according to plans and specifications on file with Messrs. Ludlam & MacDonald, Architects, of Kissimmee, Florida, will be received by the Board of County Commissioners at their meeting on the 4th day of September, 1911. The right to reject any and all bids reserved. Arthur E. Donegan, Clerk Circuit Court, Osceola County, Florida.

Brick School Building

Crawfordsville, Ark., August 16, 1911.

Sealed proposals will be received by the undersigned up to September 15, 1911, for the construction and completion of a brick school building at Crawfordsville, Arkansas.

Plans and specification may be had upon application to the architect, Clyde A. Ferrell, 314 National Bank Building, Little Rock, Arkansas, and to the President of the Board, Mr. C. L. Campbell, Crawfordsville, Ark. Plans will also be on file with the Little Rock Builders' Exchange, 601-604 State National Bank Building, Little Rock, Ark., provided that each application is accompanied by a deposit of \$20.

Each bid must be accompanied by a certified check for the sum of \$1000 as a guarantee from each contractor that if awarded the contract he will provide satisfactory fidelity company's surety bond for the performance of the contract within fifteen days after notification.

The right is reserved to reject any or all bids.

C. L. CAMPBELL,
President School Board, Crawfordsville, Ark.

Proposals for Erecting Brick School Building, Gainesville, Florida

Sealed proposals will be received by the Board of Trustees of Sub-School District No. 26, Alachua county, Florida, until 12 o'clock noon September 30, A. D. 1911 (at which time they will be opened), for the erection of a two-story-and-basement brick school building at Gainesville, Florida.

Bids must be addressed to Hon. W. W. Hampton, Chairman, and sent to J. H. Vidal, Esq., Secretary of the Board, Gainesville, Florida.

All bids shall be accompanied by a certified check for \$500, made payable to W. W. Hampton, Chairman. The proceeds of said check to become the property of the Board as and for liquidated damages if the bidder to whom the contract is awarded fails or refuses to execute the contract and bond required within ten days.

Six months will be allowed for the erection of the building.

Checks submitted by unsuccessful bidders will be returned after approval of contract and bond executed by successful bidder.

Plans and specifications can be secured on application to J. H. Vidal, Esq., Secretary of the Board, Gainesville, Florida, or from the Architects, McClure & Holmes, No. 135 E. Bay St., Jacksonville, Florida.

A check for \$25 must be deposited for each set of plans and specifications. Said check will be returned when plans and specifications are returned to the Secretary of the Board or the Architects.

The Board reserves the right to reject any or all bids.

BRIDGES

Steel Bridge

NOTICE TO CONTRACTORS.

Notice is hereby given that the contract to build a steel bridge across Fair River, on Rockport road, near Vanilla, Miss., will be let at the courthouse door in the town of Monticello, Miss., on Monday, September 4, 1911, at 2 o'clock P. M., to the lowest responsible bidder, according to plans and specifications on file with the clerk (no extra plans to distribute). Certified check for ten per cent. of amount of bid required to be placed with the clerk by each before letting. The Board reserves the right to reject any and all bids.

This August 7, 1911.

W. H. SPEIGHTS, Clerk.

Notice to Bridge Builders

Sealed bids will be received by the Board of Public Works of the City of Tampa, Florida, at their office, Room 28 First National Bank Building, up to 2 o'clock P. M. Wednesday, September 6, 1911, for the construction of a reinforced concrete or concrete-steel bridge, with bascule lift, over the Hillsborough River at Lafayette street. A certified check of \$10,000 must accompany each bid as a guarantee that the successful bidder will enter into contract according to their bid and specifications within ten days after award of same.

Plans and specifications to accompany each bidder's proposal.

A profile of the river at the bridge site and information can be obtained from the engineer of the Board.

The city reserves the right to reject any or all bids.

D. B. McKAY, Chairman.

Attest: ALLEN THOMAS, Clerk.

Bridge NOTICE.

The County Court of Nicholas County, West Virginia, will meet at the Courthouse of said county on the 11th day of September, 1911, and receive bids until noon, 12 M., for building the superstructure and substructure of a bridge over Cherry River at Fenwick.

Said bridge to be one span, 135 feet in length, and 14 feet in width; substructure to be of stone or concrete, and superstructure of steel.

Plans and specifications for the work are on file in the office of the Clerk of the County Court for the inspection of bidders.

P. N. WISEMAN,
Clerk of the County Court.

MISCELLANEOUS

Leather Belt

City of New Bern wants bids on one 24-inch three-ply leather belt about 85 feet long. Must be guaranteed strictly short lap, first quality oak tanned by slow process.

City reserves the right to reject any and all bids. Bids will be opened September 15, 1911. Specifications furnished on application. Address T. F. McCarthy, Chairman W. & L. Committee, New Bern, N. C.

Tubular Boiler

City of New Bern wants bids on one 200 H. P. (84"x18") horizontal tubular boiler for working pressures of 150 pounds. Copy of specifications furnished on application. City reserves the right to reject any and all bids. Bids will be opened September 15, 1911. Address T. F. McCarthy, Chairman W. & L. Committee, New Bern, N. C.

Constructing Market-House and Auditorium

Bids will be received until September 6, 3:30 o'clock, for the construction of the new Market-house and Auditorium in this city by Mr. Fred J. Fox, Secretary Market-Auditorium Company. This building is to cost in the neighborhood of \$150,000 and is to be of fireproof construction. Bids will be received for the construction of the whole building or parts thereof. For further information address Fred J. Fox, Secretary Market-Auditorium Company, or Fred F. Faris, Architect, Wheeling, W. Va.

Constructing Water-Works and Electric Light Plant

Bids will be received up to 3 P. M. September 4, 1911, for complete equipment for water-works and electric-light plant. Equipment for the City of Hearne, Texas. Specifications may be had by addressing the O'Neil Engineering Company, Praetorian Building, Dallas, Texas.

Material for Water-Works System

Sealed bids will be received by the Mayor and City Council at Chillicothe, Texas, up until 6 P. M. Thursday, September 7, and by them publicly opened on that date, for the purchase by the city of all material required in the construction of water-works system, including boilers, heater, pumps, water-works pipe, valves, hydrants and tank and tower.

Quantities and specifications can be had by addressing the O'Neil Engineering Company, Consulting and Supervising Engineers, 1503-S Praetorian Building, Dallas, Texas.

Water Purification Plant

MUSKOGEE, OKLAHOMA, PUBLIC IMPROVEMENTS.

Sealed proposals will be received by the Mayor and City Council of the City of Muskogee until Tuesday, September 5, 1911, at 10 o'clock A. M., and opened immediately thereafter, for the construction of a 6,000,000-gallon water-purifying and softening plant for the City of Muskogee, Oklahoma.

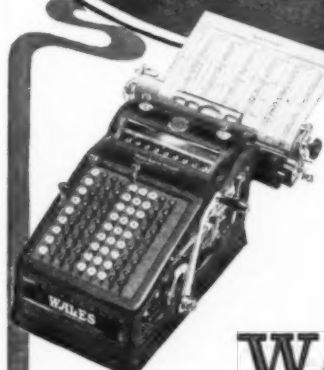
Bids will be received at the present time for the Concrete Basins only.

A certified check for ten per cent. (10%) of the amount of bid shall accompany the proposal. Plans can be seen and specifications secured at the office of the City Engineer or at the office of the Consulting Engineer, No. 114 Liberty St., New York, on or after August 17, 1911. The right is reserved to reject any or all bids, or to accept that one which, in the judgment of the City Council, is for the best interest of the City.

By order of the City Council.
E. H. FLEMING,
Commissioner.

T. P. CLONTS,
City Engineer.
ALEXANDER POTTER,
Consulting Engineer.

Free Trial Will Convince You



You either do not need an adding machine or you cannot afford to be without one. Settle the question now by taking the WALES on free trial. Try it alone or in competition with any or all other adding machines made. We know the WALES will prove our claims, for 97% of our sales are made after rigid competitive tests.

WALES

Visible Adding and Listing Machine

More than 40 Models

The WALES is the only adding machine guaranteed five years. This means we stake our reputation on WALES workmanship and durability. You will find in the WALES visible printing, visible total, easy handle pull, and some features common to no other adding machine.

But send the coupon. Let the WALES prove its own case. Using the machine places you under no obligation to buy.

THE ADDER MACHINE COMPANY, Wilkes-Barre, Pa.
Agents in all leading cities

High-grade and efficient salesmen will be given consideration, trained and placed in desirable territory. Address Manager of Agencies, Wilkes-Barre, Pa.

Pin Coupon to your Letterhead

Send particulars of your free trial offer and booklet describing the WALES Visible.

Name _____
Address _____
Business _____
Mfrs. Record 8-31-11.

Special Advertisements of General Interest.

"TIMBER TO BURN"

We have on our list some of the biggest bargains in tracts of timber, both soft and hard woods, that it has been our pleasure to offer the public, and intended buyers will do well to get our list.

We also have several coal properties for sale.

BELLER & WILSON

Headquarters for Timber and Coal. 402-404 Nat. Exchange Bank Bldg., ROANOKE, VA.

BEST BODY OF TIMBER LAND IN THE SOUTH

at the price, for Sale

15,000 ACRES, LOCATED in western part of Fannin County, Ga., between two Louisville & Nashville Railroads, with branch road running into property.

Will cut from 4000 to 5000 feet first class merchantable lumber to acre, consisting Poplar, Oak, White Pine, Hemlock, Ash, Birch and Hickory, not to mention Acid Wood, Tan Bark and Cord Wood; besides there is thousands of Crossties and Telegraph Poles.

Fine prospects for Copper, we think the same vein as Tennessee Copper Co. is now working, covers property.

In addition to above boundary, it is possible to get many thousands of acres same kind of land adjoining.

Price, if purchased immediately, \$12.50 per Acre. Address

DeWITT & MEREDITH, - - - Knoxville, Tenn.

WATER-FRONT PROPERTY IN VIRGINIA

Suitable for factory development or private investment. 73½ acres high land, 6½ acres open water with a fine water-frontage of 1426 feet on Deep Creek near Gilmerton, close to Navy-Yard and not far from City of Portsmouth.

This excellent water-front property will become very valuable in the near future. At present there are railroad facilities within 500 yards. Will sell to quick purchaser for \$150.00 per acre.

S. L. NUSBAUM & CO.

Suite 600 Citizens' Bank Bldg., Norfolk, Va.

SOIL WILL STAND ANALYSIS. \$25.00 and up for best of Farm Lands in El Paso Valley, under the Elephant Butte Dam.

RALPH W. LOOMIS, EL PASO, TEXAS. Any Local Bank for Reference.

8% 7% 6%

We can sell you best securities of City Property or Farm Lands paying 8%, 7%, 6%.

Note Mortgage & Real Estate Co.

EL PASO, TEXAS

References—An Local Bank.

JAIL STEEL AND CELL WORK FOR SALE

Notice is hereby given that Marion County has for sale Steel and Cell Works for a small jail, constructed by the Manly Jail Building Company, Dalton, Ga.

S. T. Sistrunk,

Clerk Board County Commissioners, Ocala, Fla.

Choice Factory Sites FOR SALE

In Canton, the Industrial Suburb of Baltimore

Many different industries are thriving in Canton, but we can still offer a number of favorable sites, both water front and inland.

The B. & O. and the Pennsylvania Railroads run right through the property. Transportation facilities all that could be wanted. Raw material for almost any kind of industry easily obtained. The Southern market near at hand.

We want to hear from newly formed manufacturing concerns as well as from existing plants that contemplate moving or establishing a branch plant.

Detailed information gladly and promptly given.

CLOUD & CLARK

State Bank of Maryland Building

BALTIMORE, MD.

GEORGIA FARM LAND FOR SALE

About 10,000 acres fertile farm land within 38 miles of Savannah, Georgia: healthy location and good water, suitable for colonization. A good stand of yellow pine timber, estimated at 20,000,000 feet and thousands of cords of wood. Located for seven miles on two main line railroads, giving low freight rates, secured by water transportation competition, to Northern markets, with all-year markets close at hand. Will not divide tract. Will sell outright or put in property and take interest with financially able developing company.

W. W. ROBERTSON, Owner

NORFOLK, VA.

An Up-to-date Wood Working and Saw Mill Plant for Sale

Complete in every particular. Covering 2½ acres of land in the center of Norfolk, now doing a business of over \$100,000 per year. For sale cheap.

Details furnished on application.

ABBOTT MORRIS & CO.

NORFOLK, VA

Woodworking and Manufacturing Plant For Sale by Owner

We offer for sale our entire plant, having an established trade of over twenty-five years and doing an annual business of over \$600,000.00.

The plant consists of thirteen acres, located in one of the principal cities of Georgia, and is covered with buildings, sheds and lumber yard.

The main building is of brick, 80x200, two stories, and equipped with up-to-date machinery for the manufacture of sash, doors and blinds and interior wood work. Has separate boiler plant and two 350-horse-power Corliss engines.

The office building is brick 70x100, three stories.

There are two brick drykilns, two warehouses, eight lumber sheds, stables and garage. The factory makes its own fuel, and there are two wells supplying ample water for all purposes.

Object of sale, owner wishes to retire from active management. Would not object retaining part interest.

Address **MANUFACTURING PLANT**, care of the Manufacturers Record, Baltimore, Md.

Notice of Public Sale by the Trustee of the Property of the GEORGIA COTTON MILLS of Dublin, Laurens County, Georgia

Notice is hereby given that the undersigned Trustee, under that certain Mortgage Deed of Trust executed by the Georgia Cotton Mills, a corporation of Dublin, Laurens county, Georgia, on the first day of March, 1909, recorded in the office of the Clerk of the Superior Court of the said county of Laurens in Book 54, pages 19 et seq., to secure the issue of bonds therein mentioned, and also as Trustee under that certain other Mortgage Deed of Trust executed by the said Georgia Cotton Mills on the first day of October, 1910, recorded in said Clerk's office in Book 58, pages 510 et seq., to secure the issue of bonds therein mentioned, defaults having occurred under the provisions of both mortgages, will sell at public outcry, to the highest and best bidder, and in accordance with the terms and provisions of the said Mortgage Deeds of Trust, at Dublin, Laurens county, Georgia, before the County Courthouse door, between the legal hours of sale, on the first Tuesday in December next, to wit, on Tuesday, December 4, 1911, all the property described in the said two Mortgage Deeds of Trust and mortgaged or intended to be mortgaged thereby, to wit:

That tract of land containing sixty-three and sixty-five hundredths (63.65) acres, more or less, situated in said county of Laurens, State of Georgia, in the three hundred and forty-second (342) district G. M., and being a part of lot of land number one hundred and sixty-four (164), and described in a plat recorded with a deed from W. W. Robinson to the Dublin Cotton Mills, dated November 29, 1899, in the office of the Clerk of the Superior Court of Laurens County in Book 8 of Deeds, folios 54 and 55; also that tract lying in the First Land District of Laurens county, Georgia, known as the Robinson Mill Place or Lot, containing twelve (12) acres, more or less, less two (2) tracts of two (2) acres each sold off from said tract; also that tract containing two (2) acres, more or less, being in the First Land District of said Laurens county. The cotton-mill buildings and machinery of the said Georgia Cotton Mills being located on said property.

Also, all the entire textile machinery of every character located in the cotton-mill buildings on the above-described premises, comprising what is known as machinery for an eight thousand (8000) spindle mill, two hundred and sixty (260) looms, made by the Lowell Machine Shop, including the auxiliary machinery, mill fixtures, engines and boilers, belts, pulleys, shafting, tools, lathes, drills, electric-light engine and dynamo, elevator, fire apparatus and mill supplies.

All of the property of the Georgia Cotton Mills, mortgaged or intended to be mortgaged by said Mortgage Deeds of Trust, will be sold, and reference is made to the said two mortgage Deeds of Trust for a more particular and full description of the said property.

Said sale being made in order to collect the principal and interest of all of the bonds secured by said two mortgages, and all taxes, disbursements, incident to the preservation and protection of said property, expenses, fees, commissions and costs, as provided in said two mortgages.

Terms cash. Purchaser paying for title.

This August 28, 1911.

THE CITIZENS' AND SOUTHERN BANK.

By M. B. Lane, President.

Trustee.

Savannah, Georgia.

ADAMS & ADAMS,

Attorneys for

Trustee,

Savannah, Ga.

GOOD INDUSTRIAL SITES NEAR WASHINGTON, D. C.

FOR

Handle Works, Chair Factories Wood-working Plants of any kind; Brick Yard, Tile Works, Clayworking Plants of any kind; Knitting Mills, Sand and Gravel Plants, etc.

Ample high grade raw materials for such industries. Plenty cheap, good labor. No local taxation. Situated in Virginia, on main rail lines between Washington, D. C., and Richmond, 30 miles from Washington. On Potomac, River connecting with water points anywhere.

Come now and have first choice. Details gladly given by

H. B. HUTCHISON

Colorado Building

WASHINGTON, D. C.

Face, Fire and Pavement Brick, Tile Clay and Manufacturing Sites ON THE SOUTHERN RAILWAY AT NEWCOMB, TENNESSEE

We have a large deposit of Clay, Shale and Soapstone, Pure Lime Rock and Cement Rock, Building Stone and Pure White Silica Sand, with a bounding of Bituminous Coal and the best Cannel Coal in the world.

Analysis will be furnished on application for the above material and those looking for the best location.

For information you should write to the

ITALIAN BLUE GEM COAL CO.
NEWCOMB, TENNESSEE
PETER ZECHINI, Gen. Mgr.

PARTY WITH TRACTION ENGINE WANTED

The Llano (Texas) Commercial Club wants to get in correspondence with a party, who has his own traction engine, to haul granite blocks to railroad from different quarries. Distance 4 to 12 miles; 50 tons a day. Address

LLANO COMMERCIAL CLUB
LLANO, TEXAS

Gilt Edge Securities For Sale

6% Private Corporation First Mortgage Bonds.
5% County and Municipal Bonds.
Write for information and references.
WIMER, RICHARDSON & COMPANY,
Investment Bankers, San Antonio, Texas.
Unincorporated.

WANTED

Location for Silk Mill

Silk Mill.—An old-established firm wishes to start a branch mill in the Middle South where plenty of good labor and cheap power can be obtained. Would employ 300 or more. Give full particulars in reply. Address Silk Co., care Manufacturers Record.

Hardwood Timber FOR SALE

The Hardwood Timber, consisting of Ash, Hickory, Gum, Elm and Hackberry, on 16,000 acres of land; splendid shipping facilities, railroad passing through the land.

A good handle and slack stave proposition.

Timber must be moved in order to clear land.

For particulars write

Mann Land & Improvement Co.
TEXARKANA, ARK.-TEX.

Complete Saw Mill Plant, Dry Kiln and Logging Equipment

FOR SALE

Mill has a daily capacity of 25,000 feet. Logging outfit consists of Locomotive, three and one-half miles of tramroad and six log trucks. Eighteen to twenty million feet of choice Pine timber, well blocked. Mill located about 35 miles south of Savannah, on the Seaboard Air Line Railway. Fifteen to twenty million feet additional timber can be had in easy reach of this plant. For full particulars address

ALBERT FENDIG & CO., Brunswick, Ga.

33,000 Acres Tennessee Coal and Timber Land

Same coal being coked near by Virgin Forest R. R. and all other investments inviting. For present development or future estate.

G. O. SMITH, Wheeling, W. Va.

Bargains in Machinery and Supplies.

Rebuilt Engines and Boilers

Engines—Corliss.—18x42 Lane & Bodley, 18x35 Ohio Heavy Duty, 16x42 Allis, 12x30 Lane & Bodley.

Engines—Automatic.—14½x24 Buckeye, 11x16x12 Buffalo Compound, 13½x15 Taylor, 12x16 Atlas, 13x12 Harrisburg-Ideal, 13x12 Phoenix, 12x14 Green, 12x12 Arlington & Sims, 11x16 Atlas, 10x12 Valley, 8x14 Noyes.

Engines—Throttling.—18x24 Atlas, 14x18 Sinker-Davis, 14x14 Lewis Vertical, 12x16 Reed, 12x14 Brownell, 10x16 Bass, 10x12 Atlas, 8x14 Lane & Bodley, 8x10 Erie, 6x8 Industrial.

Boilers—Stationary.—72x18, 66x16 High-Pressure, 72x18 Standard, 72x16, 66x18, 60x16, 60x14, 54x14, 48x14, 44x14, 44x12, 42x12, 36x16, etc.

Boilers—Fire Box.—100, 80, 60, 50, 40, 25, 20, 25, 20, 16, 12, 10 and 8 H. P., etc.

Boilers—Vertical.—50, 40, 35, 30, 25, 20, 16, 12, 10, 8, 5 and 3 H. P., etc.

Heaters.—All sizes, Open and Closed.

Pumps.—All sizes, Single and Duplex.

Electrical.—30 K. W. Generator, direct connected to 8x10 Skinner Engine; 20 K. W. Generator, direct connected to 8x10 Economic Engine; 18 K. W. Belted Generator.

Miscellaneous.—Sawmills, Lath Mills, Edgers, Cut-off Saws, Re-Saws, Blowers, Exhaust Fans, Tanks, etc. Write for list. Also full assortment of new machinery.

Sole manufacturers of the celebrated "Leader" Injectors and Jet Pumps. Send for circular.

THE RANDLE MACHINERY CO.
1734 Powers Street CINCINNATI, OHIO

BOILER, DERRICK, DRILL, ENGINE FOR SALE

One 80 H. P. Roberts Water-Tube Boiler.
One 25 H. P. Erie Engine, complete, with governor.
One F-32 Ingersoll-Sargeant Rock Drill, with steels.
One Steel Derrick, 81-foot boom, steel bull wheel, plow steel cable.

Address SEARING WILSON, 515 Penna. Bldg., Phila.

Western 5-ft. Plain Radial Gear Box and Tapping Attachment. Condition, Gilt Edge. Cement Planer 42"x36"x8", Two Heads. Condition, Good.
Chandler & Farquhar Co.
Boston, Mass.

Cement Plant

We have purchased the entire plant of the White Cliffs Portland Cement Company, White Cliffs, Ark. The machinery has been used less than one year and is all practically new.

One 20 and 38x54 St. Louis Tandem Compound Condensing Corliss Engine, complete, with condensing pumps; also one 48" triple leather belt about 125' long; price \$1500.

Three Jaw Rock Crushers in A-1 condition.

Three 72x18 Horizontal Tubular Boilers,

\$300 each.

One 18x10x12 Snow Underwriter's Pump,

1000-gallon capacity, \$550.

Two hundred Double-Deck Brick Cars, 24" gauge, roller bearing, \$5 each.

Four 30" Sturtevant Rock Emory Mills, \$100 each.

Six 42" Sturtevant Rock Emory Mills, \$150 each.

One Fairbanks Brick-Testing Machine, complete, with weights and brass molds, \$150.

All prices f. o. b. White Cliffs, Ark.

LOUIS S. SIMON & COMPANY,

P. O. Box 126, Station A, Houston, Tex.

Second-hand Motors, Engines and Pumps for Sale Cheap

1 Slide-Valve Engine, 10x16".

1 12x16" Herron Pump.

1 Rotary Blower, ¾" size.

1 7½x8½x12" Dean Pump.

1 4½x3½x1" Worthington Pump.

1 12x36" Frick Corliss Engine.

1 3x2x3" Worthington Pump.

1 80 K. W. Crocker Wheeler Generator, 220 volt, D. C.

1 Root Rotary Blower, size No. 3.

1 20 H. P. Westinghouse Motor, 220-volt, D. C.

1 30 H. P. Westinghouse Motor, 220-volt, D. C.

1 15 H. P. Westinghouse Motor, 220-volt, D. C.

1 55 H. P. Crocker-Wheeler Motor, 220-volt, D. C.

1 10 H. P. Hobart Motor.

1 5 H. P. Hobart Motor.

1 3½x1½x3" S. V. Pump.

Address

GENERAL PIPE & FOUNDRY CO.,

Atlanta, Ga.

Pump For Sale

One triple 8x10 Dean Electric Pump, capacity 300 gallons per minute, 6-inch suction, 5-inch discharge, without motor. Pump never been installed, as it was not needed. Can be bought at a bargain, as not now needed. Particulars furnished on application.

Public Service Commission, Yazoo City, Miss.

ROPE

Brand New, First-Class Condition.

Subject to stock and prior sale.

MANILA.....6c. per lb. } f. o. b. St. Louis.

SISAL.....4c. per lb. }

2 full coils 1½" Manila. 1 full coil 13-16" Sisal.

1 half coil 1½" Manila. 2 full coils ¾" Sisal.

3 half coils 2" Manila. 5 full coils ¾" Sisal.

1 full coil 1" Sisal.

3 reels 2-ply Medium Baling.

3 coils 110 Tarred Lath Yarn.

12 full coils 1" Sisal. 1 full coil 1½" Sisal.

5 half coils 1½" Sisal. 2 full coils 1½" Sisal.

4 full coils 1½" Sisal. 1 half coil 1½" Sisal.

1 reel 3-ply Medium Baling.

3 reels 3-ply Medium Baling.

WALTER A. ZELNECK SUPPLY CO.,

St. Louis, Mo.

For Sale—Nearly New

Boilers, 50, 35, 20 H. P.

Compressors—Sullivan Straight-Line, 8x8x10.

9x9x12; Rand, 12x12x16.

Hoists—30 H. P. Flory, 6x6 O. & S., 5x5 Double Bacon.

Drills, piston and air hammer.

12-lb. Relaying Rail.

12"x18" Buchanan Crushing Rolls.

CAROLINA BARYTES CO.,

Stackhouse, N. C.

Complete Power Plant

AT HUNTINGDON, PA.

OWING TO CONSOLIDATION OF TWO ELECTRIC COMPANIES A FINE MODERN PLANT IS BEING DISMANTLED, AND THE FOLLOWING MATERIAL IS FOR SALE AT A LOW PRICE:

3—72"x16' Boilers, 100 pounds pressure.

1—100 K. W. 125-250 volt 3-wire Generating Set, Fort Wayne Generators and Harrisburg Auto.

Engines.

1—14x16" McEwen C. C. Engine.

1—12x12" Ball C. C. Engine.

1—500 H. P. Closed Heater.

2—6x4x6" Smith-Vaile Pumps.

WILL BE SOLD ENTIRE OR IN

PART TO SUIT PURCHASER

WICKES BROTHERS

JERSEY CITY, N. J.

MACHINE AND REPAIR SHOP FOR SALE

I have for sale a small machine shop and foundry, well located at a junction of two roads, well equipped for doing general repair work. Satisfactory reasons given for selling. Address

J. A. BROWN,

Chadbourne, N. C.

Bargains in Machinery and Supplies.

ENGINES AND CONTRACTORS' EQUIPMENT FOR SALE

Three pairs twin Corliss engines, cylinders 20 by 42. Will sell at sacrifice. Guaranteed in first-class condition and can be delivered immediately. Can be separated if desired.
Also the following—87 Ellison 4-yard dump cars, 36 gauge; 75 tons relay rails, 45 and 60 pounds
1 Mundy 7 by 10 D. C. and D. D. hoisting engine. Cheap to quick buyer. Address

BOSTON IRON & METAL CO., BALTIMORE, MD.

DYNAMOS AND MOTORS

I buy, sell, rent and exchange.
The best and the cheapest.
Let me know what you have for sale and what you want to buy.

THOMAS YEARSLEY
211 N. 3rd St. Philadelphia, Pa.

ELECTRICAL EQUIPMENT

Direct-Connected Lighting Sets, 110-125 volts.
9 K. W. Crocker-Wheeler, with Case Engine.
15 K. W. General Electric, with Ideal Engine.
100 K. W. General Electric, with Ball Engine.
10-25-50-100 K. W. 110-125-volt Belted Generators.

250 K. W. Thresher, 110-125-volt Belted Unit.
30-50-75-100 K. W. 220-250-volt Belted Generators.
5-10-20-25-30-50-70 H. P. 220-volt Motors.
150 and 300 K. W. Belted Alternators, 2 and 3 phase, 25 and 60 cycles.
Alternating Current Motors, all sizes, cycles and voltages.
Electrical machinery of all kinds purchased. Send list of what you have. Write for list and prices.

DANIEL KILLION,
211 N. Third St., Philadelphia, Pa.

USED MACHINERY AND TOOLS

FOR SALE

A lot of Engines, Boilers, Blowers, Bolt Cutters, Emery Grinder Stands, Knife Grinders, Pulley Lathes, Nut Tappers, Engine Lathes, Small Planers, Cupolas, Woodworking Machinery, Pumps, Shears, Rolls, Line Shafting and Hangers.

We will gladly furnish a printed list giving specifications to interested parties.
These tools have to be moved shortly, therefore we will sacrifice them at very low prices.

BERTSCH & COMPANY,
Cambridge City, Ind.

WE BUY

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Factories

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and all kinds of

Industrial Plants

We are always in the market to buy

Scrap Iron and Steel

OF EVERY KIND

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Harrison Building
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PHILADELPHIA, PA.

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One 24"x14" Lathe. One 20"x10" Lathe. One 18"x8" Lathe. One 14"x6" Lathe. One 30 H. P. Traction Engine. One No. 2 B. Koehring Cement Mixer. One No. 1 B. Koehring Cement Mixer. One No. 1 Smith Mixer, with gasoline engine. One No. 1 Smith Mixer, with boiler and engine. Two 125 H. P. Hor. Tub. Boilers. Two 110 H. P. Hor. Tub. Boilers. One 90 H. P. Portable Boiler on skids. Three Berlin Planers and Matchers, 4"x19". One Mississippi Planer and Matcher, 4"x14".
CHAS. T. LEHMAN, Birmingham, Ala.



16th and Lincoln Sts., CHICAGO.

We have the largest stock of second-hand electrical machinery in the world. Send for our "monthly Bargain sheet," showing complete stock with net prices. We can save you fully one-third. All machines completely overhauled, tested and shipped practically "as good as new."

PLANERS

1 84"x84"x20" "Sellers," two heads on cross rail.
1 84"x84"x14" "Sellers," two heads on cross rail, one side head.
Both worm drive, in good condition.
We also have a full line of smaller Planers in stock. Send us your inquiries.

L. F. SEYFERT'S SONS, INC.,
437-441 North 3d St., Philadelphia.

Engines, Boilers, Generators, etc.

2 30x48 Corliss Engines.
2 24x48 Corliss Engines.
1 22x32 Buckeye Engine.
2 Phoenix Tandem 12 and 20x16 Engines.
1 Allis Corliss Tandem, 22 and 24x48 Engine.
Engines direct connected to generators.
SEND for list and prices.
THE DONNER RAILWAY EQUIPMENT CO.
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Direct Connected Units

FORMERLY USED FOR LIGHTING

Of Brooklyn Bridge

Unit No. 1. Walker generator, 425 amp., 125-volt, speed 280 rpm., D. C., Ball & Wood engine.

Unit No. 2. Walker generator, 425 amp., 125-volt, speed 280 rpm., D. C., Ball & Wood engine.

Unit No. 3. C. & C., 6-pole, 400 amp., 125-volt generator, 280 rpm., D. C., Reeves Hor. engine.

Unit No. 4. Fort Wayne generator, 75 kw., 6 pole, 125 volt, speed 275 rpm., D. C., 14x14, McEwen engine.

Unit No. 5. Fort Wayne generator, 75 kw., 6-pole, 125-volt, speed 275 rpm., D. C., 14x14, McEwen engine.

These two had only one year service.

Unit No. 6. C. & C. generator, 60 kw., 125-volt, speed 275, D. C., Ball & Wood engine.

Unit No. 7. C. & C. generator, 60 kw., 125-volt, speed 275, D. C., Ball & Wood engine.

All the above in perfect condition and immediate delivery. Offered at attractive prices.

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Jos. H. Thompson, Jr., Co.

HUDSON TERMINAL BUILDING, NEW YORK

DYNAMOS and MOTORS

Direct Connected Units

Belted Generators

Alternating Current Motors

Direct Current Motors

300 OF THEM

Thoroughly overhauled and fully guaranteed.

In stock for immediate delivery.

We Buy, Sell, Repair, Rent or Exchange.

E. LEVENE & CO.

124 N. 3d St., Philadelphia

CONCRETE MIXERS

ATTRACTIVELY PRICED

All in stock in Philadelphia, ready for immediate duty.

1 Model 1 "American," with engine.....\$125
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1 No. 2 1/2 "Smith," with eng. and boiler..... 550
1 No. 11 "Municipal," with engine..... 400
1 No. 11 "Municipal," engine and boiler..... 525
1 No. 11 "Municipal," chain driven..... 225

L. F. SEYFERT'S SONS, INC.,
437-439 North 3d St., Philadelphia.

VERTICAL BOILERS AND STEAM ENGINES

All in first-class repair

Vertical Engines.	Horizontal Engines.
2 20 Horse-power.	1 30 to 35 Horse-power.
2 15 Horse-power.	1 20 Horse-power.
2 9 Horse-power.	1 15 Horse-power.
1 3 Horse-power.	

Vertical.	Horizontal.
2 40 Horse-power.	1 90 Horse-power.
1 15 Horse-power.	1 18 Horse-power.
1 25 Horse-power.	

2 Steam Pumps. 1 Candy Cooler. New Vertical Steam Engines, 2 to 25 Horse-power. Send for circular.

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For Sale at Bargain Prices

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One 24"x8" Five-Step Cone-Head q. c. g. Lodge & Shipley Engine Lathe.
Two 3 1/2"x60" Fitchburg Lo-Swing Lathes.
One No. 3 Lodge & Shipley Rapid Reduction Lathe with 8' bed.

PLANERS
One 36"x36"x10' Three-Head Sellers.
One 36"x36"x26" Four-Head Sellers.
One 42"x42"x20" Single-Head Putnam.

MISCELLANEOUS
One Whitton Revolving Centering Machine.
One Franklin Cold Saw, 3 1/2" capacity.
Two No. 3 Nutter-Barnes Cold Saws, 6" capacity.
One No. 2 Higley Cold Saw, 6 1/2" capacity.
One Schuster 1/4" Riveter, Model "A."
One Mumford 12"x40" Power Ramming Molding Machine.
One Globe Power Hack Saw, 8" capacity.
One Universal Power Hack Saw, 6" capacity.

THE LODGE & SHIPLEY MACHINE TOOL CO.
Cincinnati, Ohio, U. S. A.

CORLISS ENGINES

50 H. P. 10x24 Hewes & Phillips.
75 H. P. 12x28 Hewes & Phillips.
90 H. P. 12x30 Imp. Prov. Greene.
110 H. P. 14x30 Wetherill.
130 H. P. 14x36 C. L. Brown.

Full W. J. LINTON Details
136 Liberty Street, New York, N. Y.

SECOND-HAND

Machine Tools

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10x14 Lodge & Davis, chucks fitted.
11x4 Mann, R. & P.
14x6 Davis, plain rest.
14x8 Le Blond, plain rest, chuck, P. C. F.
16x6 Reed, compound rest, P. C. F.
16x8 Fay & Scott, plain rest, P. C. F.
18x8 Lodge & Shipley, patent head chuck.
20x8 McMahon, compound rest, chuck.
20x8 Fay & Scott, compound rest, P. C. F.
21x14 Reed, high speed.
27x12 Pratt & Whitney, C. R., P. C. F.
28x10 Putnam, C. R., P. C. F.
28x10 Gleason, compound rest, taper.
30x12 Pond, C. R., P. C. F.
32x17 Cement-Miles, C. R., triple geared.
36x16 Reed, compound rest, P. C. F.
40x18 Newark, triple geared, C. R., P. C. F.
46x38 Fitchburg, T. G., C. R., P. C. F.
102x35 Cement, compound rest, T. G.
21x14 Powell, compound rest, P. C. F.
24x14 Niles, compound rest, P. C. F.
26x13 Fitchburg, compound rest, P. C. F.
84x20 Fitchburg, C. R.

SCREW MACHINES.

2x24 Jones & Lamson, flat turret.
20x6 Bardner & Oliver, friction head.
No. 2 1/2 Warner & Swasey, wire feed.
No. 2 1/2 Garvin, wire feed, friction head.
No. 1 Garvin, wire feed.
1/4" National Acme, automatic.
No. 6 Brown & Sharpe, friction head.
1" Smurr & Kamen, wire feed.
1/2", 3/4", 1" and 3/2" Pratt & Whitney automatics.
No. 3 1/2" Pratt & Whitney, wire feed.
No. 2 1/2" Pratt & Whitney, wire feed.
No. 17-16" Pratt & Whitney, wire feed.

MILLERS.

No. 2 Cincinnati, plain.
No. 4 Cincinnati, plain.
No. 2 Le Blond, plain, back gears.
No. 2 Pratt & Whitney, Lincoln pattern.
No. 24 Brainerd, plain, back gears.

No. 1 Cincinnati, universal.
No. 2 Brown & Sharpe, plain.
No. 3 Cincinnati, plain.
No. 12 Brown & Sharpe, manufacturers.

DRILLS.

20" Prentice Bros., power feed.
15" Slate, sensitive.
4" Bickford, plain radial.
No. 25 Foote-Burk, high speed.
F 12" Baker Bros.
10-spindle Gardam, adjustable.
40" New Haven, sliding head, back gears.
30" Gang, plain radial.
8" Baush, plain radial.
7-spindle Slate, bedstead.

SHAPERS.

12" Gould & Eberhardt, crank.
15" and 20" Hendey, friction.
13" Lodge & Davis, crank.
28" Cincinnati, geared.

MISCELLANEOUS.

Boring Mill, 37" Bullard, 2 heads.
Grinder, Sellers, universal tool.
Planer, 36x36x8 Betts, 1 head.
Planer, 26x26x8 Pond, 2 heads.
Planer, 36x36x12 Betts, 4 heads.
Planer, 48x48x8 Farrell, 1 head.
Planer, 48x48x15 Pond, 3 heads.
Boring Mill, 10" Pond.
Grinder, Walker, electric surface.
Grinder, No. 2 1/2 Bath, universal.
Gas Engine, 8 H. P. Fairbanks.
Hammer, 50 lbs., Bradley, compact.
Hammer, 1000 lbs., Pratt & Whitney, drop.
Gear Cutter, 16x4 Gould & Eberhardt.
Grinder, 12x42 Landis, universal.
Pipe Machine, No. 6 1/2, 6", Merrill.
Slotter, 16", Cement, motor driven.
Keyseater, No. 2 Davis.
Brake, 8" Niagara.
Pipe Machine, 3" Jarecki.
Gas Furnace, No. 17 American.

Prentiss Tool & Supply Company

149 Broadway New York

IN STOCK

Rebuilt and guaranteed for immediate delivery

BOILERS.

- 1 150 H. P. Manning Vertical Tubular, 125 lbs. steam.
1 60"x18" Horizontal Return Tubular, 125 H. P., 125 lbs. steam.
1 80 H. P. Heine Water-Tube, 125 lbs. steam.
1 80 H. P. Economic, 100 lbs. steam.
1 75 H. P. Scotch Marine, 125 lbs. steam.
1 50 H. P. Economic, 100 lbs. steam.
SPECIAL—Cheap before removal.
1 60"x20" Horizontal Return Tubular, 125 H. P., 125 lbs. steam, with Wilkinson Stokers. Large stock of return tubular and vertical types, all sizes.

ENGINES.

- 15"x18" Reynolds. 26"x30" Corliss.
15"x18" Cooper Tandem Compound.
15"x18" Greene. 20"x42" Greene.
15"x30" MacIntosh & Seymour.
15"x30" Bates.
15"x30" Watts-Campbell.
15"x30" Russell. 12"x22"x42" Greene.
15"x24" Buckeye.
Large stock of smaller sizes; also automatic and plain slide-valve, vertical and horizontal.

AIR COMPRESSORS.

- 24"x24"x30" Hand Single Straight Line, 1300 cu. ft.
24"x24"x30" Ingersoll-Sargeant Straight Line, Class A, 975 cu. ft.
18"x18"x10" Cox & Sons Duplex, 275-350 cu. ft.
18"x18" Bladell Single, 135 cu. ft., belt driven.
Large stock of smaller sizes.

DIRECT-CONNECTED GENERATORS.

- 15 K. W. 250-volt D. C. Westinghouse, direct connected to 19"x44"x18" Greene-Wheelock Engine.
15 K. W. Fort Wayne, 230-volt, D. C., direct connected to 14"x16"x22"x16" Ide Tandem Comp. Engine, 204 R. P. M.
15 K. W. 125-volt D. C. Westinghouse, 6-pole, direct connected to 10"x18"x10" Westinghouse Compound Engine, 315 R. P. M.

BELTED GENERATORS.

- 20 K. W. 250-volt Western Electric, 6-pole, belt driven, 500 R. P. M.
Large stock of Dynamos, Motors, all sizes.

HOISTING ENGINES.

- 6"x12" Webster, Camp & Lane, D. C., S. D.
7"x10" Lidgerwood, D. C., D. D., 40"x7" boiler.
7"x10" Ryan & McDonald, D. C., D. D.
7"x10" Copeland & Bacon, D. C., S. D., with base fitted for boiler.
6"x10" Flory, D. C., D. D., with 36"x7" boiler.
6"x10" Davis, S. C., S. D.
6"x10" Mundy, D. C., D. D.

WESTINGHOUSE ENGINES.

- 118"x22"x13" Westinghouse Compound, 125-300 H. P.
12"x30"x12" Westinghouse Compound, 100-100 H. P.
11"x19"x11" Westinghouse Compound, 80-120 H. P.
12"x18"x10" Westinghouse Compound, 65-100 H. P.
Large stock of Junior and Standard types.

FLYWHEEL.

- 6-ton, 25 ft. diam., 24" bore.
FEED-WATER HEATERS, PUMPS, GAS AND GASOLINE ENGINES, STONE CRUSHERS AND GENERAL EQUIPMENT.

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PLANERS.

- 18"x36"x8" Betts. 26"x26"x7" Wheeler.
18"x30"x5" Pease. 20"x20"x4" Sellers.

LATHES.

- 18"x18" Triple Geared.
18"x18" Fitchburg Lathe.
24"x10" Modern, blocked to 34".
24"x18" Draper. 22"x18" Harrington.
20"x10" 6" Rahn-Carpenter.
20"x10" Rahn-Carpenter Gap Lathe.
20"x10" Bement-Miles. 20"x5" Pond.
20"x12" Lodge & Davis.
18"x18" Rahn-Carpenter.
18"x18" Carroll-Jamelson.
18"x18" Hendey Toolroom Lathes, with collets.
Two 18"x18" Greaves & Klausman.

MILLING MACHINES.

- No. 3 Garvin Plain Miller, with dividing heads.
No. 2 1/2 Pratt & Whitney Horizontal Miller, table 11"x5".
No. 3 Cincinnati Universal Milling Machine, complete, with vertical attachment, like new.
About 20 Lincoln Type Milling Machines.

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- 18" Gould & Eberhardt.
20"x10" Pedrick & Ayer, open side.
18" Steptoe. 15" Steptoe.
18" Smith & Mills. 14" Steptoe.

PRESSES.

- Six No. 2 1/2 Philadelphia Power Presses.
Two No. 1 Philadelphia Power Presses.
PQ4 Ferracute. No. 3 Bliss Geared.
No. 3 Bliss Geared.

DRILLS.

- 6" Gang Radial. 36" Morris Radial.
6" Hilles & Jones.
18" Gould & Eberhardt Upright Drill, with taper attachment.
18" Plain.

MISCELLANEOUS.

- 18" Little Giant Trip Hammer.
18" Wells Bros. Bolt Cutter.
No. 12 Pratt & Whitney Profiler.
6" Gang Radial Drill.
18"x12" Slab Miller.
F. Eaton, Cole & Burnham Pipe Machine.
Two No. 5 Springfield Oscillating Surface Grinders.
Two No. 14 Garvin Turret Lathes.
18" Bement-Miles Single Frame Steam Hammer.

FRANK TOOMEY, Inc.

127-131 N. 3rd St. Philadelphia, Pa.

Complete Generator Plant

FOR SALE

One General Electric M. P. type Generator, D. C., 250 volts, 1200 amp., 400 R. P. M., belt driven to a cross-compound Corliss engine, 20"x36"x48".
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This plant is complete with Condensers, Belts, Pulleys, Switchboard, etc., and can be inspected running.

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Engine and Generator

FOR SALE

Alternating Current Generator No. 75,261, Type A. S., Class 8, 120-900, Form A. Volts, no load, 2080; full load, 2300. Amperes, 52; speed, 900; General Electric Co.

Harrisburg Engine, 175 horse power; speed, 290; No. 2323. Address

PAT. WATTS, Clerk and Treasurer, FORSYTH, GA.

ENGINE BARGAINS

- 8x12" Erie City Automatic.
9x10" Ames Automatic.
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10x14" Ide Automatic.
12x14" Atlas Automatic.
13x18" Erie City L. H. 4-valve.
13x21" Buckeye Automatic.
14x15" Armstrong & Sims C. C.
14x20" Atlas R. H. Automatic.
15x21" Erie City R. H. Automatic.
16x16" Rice R. H. Automatic.
18x30" Vilter Throttling Governor.
14x36" Allis L. H. Corliss.
16x42" Cooper R. H. Corliss.
18x42" Allis R. H. Corliss.

PFANNMUELLER ENGINEERING CO.

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CORLISS ENGINES

- 1 18x36 Bates. 1 22x48 Allis.
1 16x42 Allis. 1 28x54 Hamilton.
1 16x42 Brown. Automatic Engines of all sizes.
1 18x42 Lane & Bodley. 1 40-ton Corliss Engine Type De La Vergne
1 20x48 Wetherill. Ice Machine.
1 22x48 Hamilton. 1 60-ton Corliss Engine Type De La Vergne
1 24x42 Atlas. Ice Machine.
Automatic Engines of all sizes.
1 lot Brewery Tanks.
Woodworking Machinery of all kinds.
Belting, Shafting, Pulleys and Hangers.
CLEVELAND BELTING & MACH. CO.,
Cleveland, Ohio.

FOR SALE CHEAP

Four 100 H. P. Portable Return Flue Boilers. 12"x15" Erie City Engine. 12"x16" Birmingham Engine. 18"x22" H. S. & G. Engine. R. Hand Knife Grinder. 10" Outside Molder.

Tampa Machinery Exchange, Tampa, Fla.

FOR SALE — SECOND HAND PIPE

PIPE for pipe lines. PIPE for fencing.
PIPE for telegraph poles. PIPE for columns.

Complete stock, sizes 1 to 12 inches. Guaranteed in A1 condition. Special prices made on large quantities.

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FOR SALE PIPE

Second-Hand

All sizes, 1/8 inch to 24 inches

Furnished with new threads and couplings, suitable for all practical purposes; large stock constantly on hand, together with a general assortment of used contractors machinery.

MARINE METAL & SUPPLY CO.

167 South St.

NEW YORK

ROLLING MILLS, ATTENTION!

The following Engines, purchased for use at Brooklyn Bridge, New York, in best of condition, will be sold at attractive prices and are a positive "find" for one who is contemplating installing a heavy Engine. Immediate Delivery.

1—1000 hp., 38x48 Wright Corliss, fly-wheel 25' in dia.

1—750 hp., 30x48 Wright Corliss, fly-wheel 20' in dia.

1—475 hp., 25x48 Wright Corliss, fly-wheel 20' in dia.

1—325 hp., 22x36 Wright Corliss, fly-wheel 15' in dia.

2—1000 hp. friction clutches.

1—750 hp. friction clutch.

1—475 hp. friction clutch.

A fine line of large driving gears, balance wheel and rope drive wheels, at prices which will prove an object to quick buyers.

Passes to inspect and all information upon application.

Jos. H. Thompson, Jr., Co.

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MANY AAA1 CORPORATIONS SAVE 50%

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Wire or Mail Your Inquiries to

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Machinery Bargains

- 1 14"x36" Girder Frame Corliss Engine.
1 14"x42" Girder Frame Corliss Engine.
1 66"x16" Horizontal Tubular Boilers, 125 lbs.
1 42"x14" Horizontal Tubular Boilers, 125 lbs.
1 72"x30" Horizontal Tubular Boilers, 100 lbs.
1 50 H. P. Gasoline Engines.
1 18x36x10 Worthington Duplex Steam Pump.
1 14x12x12 Canton-Hughes Duplex Steam Pump.
1 60" Sturtevant Heating Fan and 1500 ft. 1" Pipe Coils, direct connected to 5x5 Vertical Engine.
1 90" Sturtevant Heating Fan with 2500 ft. 1" Pipe Coils.
200 High-grade Vault Doors.
200 1000 to 8000-gallon capacity Tanks.
Write for our Bargain List No. 239.

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35th and Iron Streets, CHICAGO, ILLINOIS

Gas Power and Electrical Equipment

FOR SALE

A 105-horse-power "Otto" Gas Producer Engine; engine, dynamo, producer, switchboard and electrical equipment, complete. Erected one year ago. No expense was spared to make this a model installation. Particulars and description can be found on page 130 of the March number of "Metal Industry." Can be inspected upon application.

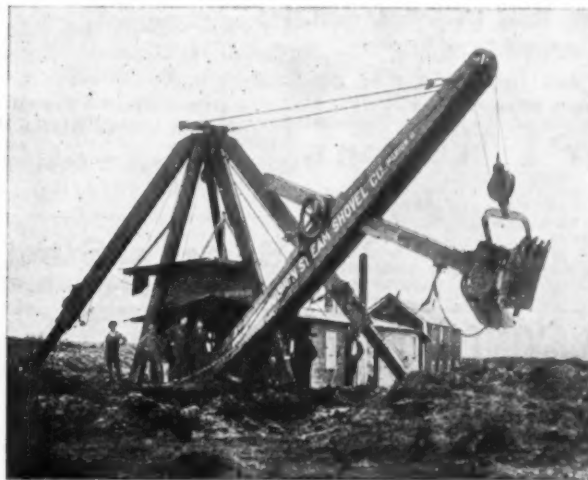
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There's a reliable way to select a ditching dredge. Take advantage of the experience of the world's largest builders in this line and get a machine that has stood the test of time, in all kinds of excavating, in nearly every country in the world, and is in actual use by the greatest number of contractors at the present time.

Marion Ditching Dredges embody the practical experience of a quarter of a century. They were first in the field; they are first in the hearts of discriminating dredgemen.



STEAM SHOVELS, DREDGES,
SCRAPER-BUCKET EXCAVATORS

Write us today for Circular No. 59.

The Marion Steam Shovel Co., Marion, O.

New York, 50 Church Street

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Railroad and Contractors' Equipment and Supplies.

Relaying Steel Rails

(20-lb., 30-lb., 40-lb., 56-lb. and 60-lb.) Advantageously located for Southern delivery; also other weights heavy section RELAYING RAILS, in different sections of the country; and NEW STEEL RAILS, all weights. We handle only first-class Relaying Rails, and do not select them from scrap. We buy Rails fit to relay, and pay spot cash.

ROBINSON & ORR, Pittsburgh, Pa.
Low Prices on New FROGS and SWITCHES.

RELAYING RAIL

500 tons 70-lb.
500 tons 65-lb.
100 tons 60-lb.
250 tons 56-lb.

PROMPT SHIPMENT

Geo. M. Newhall Eng. Co.
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New York Office: 50 CHURCH ST.

LIGHT STEEL RAILS

12, 16, 20, 25, 30 lbs. per yard
SPICES AND ANGLE JOINTS
SPIKES FOR ALL SECTION RAILS

Shipment from stock. Manufactured by
THE WEST VIRGINIA RAIL CO.
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LIGHT STEEL RAILS

Prompt Delivery
12 to 45 lbs. with Splices and Spikes
INDIANA STEEL & IRON COMPANY
Manufacturers
Sales Dept., Pittsburgh, Pa.
Mill located Linton, Ind.

RELAYING RAILS

Railway and Contractors' Equipment.
Second-hand Pipe.
Bought and Sold.

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PITTSBURGH, PA.

J. E. FRANKS

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RAILS, CARS AND LOCOMOTIVES
FROGS, SWITCHES, Etc.

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Pipe, Casing, Tubing and Rods, All Sizes,
New and Second Hand

G. MATHES IRON & METAL CO.
General Offices—ST. LOUIS, MO.

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PROMPT DELIVERY
8, 12, 16, 20, 25, 30, 35, 40 pounds per yard.
With Splices and Spikes.
UNITED STATES RAIL CO.
Manufacturers, Cumberland, Md.
Certificates of inspection by Hildreth & Co.,
Inspecting Engineers of New York City, as-
suring absolutely first quality, furnished free
of cost.

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RAILWAY and CONTRACTORS' EQUIPMENT

BOUGHT AND SOLD

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RELAYING RAILS

FROGS—SWITCHES—SPIKES, Etc.

Railway and Contractors' Equipment

Inquiries Solicited

E. C. SHERWOOD, 50 Church St. New York



FOR SALE

2 60-ton Moguls, 1 Consolidation, several
good Eight-Wheelers and Switchers, Logging
Equipment, Cars of every description, Steam
Shovels.

WE BUY AND SELL

BALDWIN EQUIPMENT & SUPPLY CO.
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60-lb. relaying rail

400 tons with angle bars. Suit-
able for contractors or logging
road. Low price.

E. H. WILSON & COMPANY
ARCADE BUILDING
PHILADELPHIA

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Relaying Steel Rails

WITH SPICES

150 tons, 48 lbs. per yard.
100 tons, 56 lbs. per yard.
500 tons, 65 lbs. per yard.
1000 tons, 67 lbs. per yard.

New Steel Rails with Fastenings

ALL WEIGHTS

THE STEEL RAIL SUPPLY CO.

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RAILS LOCOMOTIVES

RELAY RAILS

LOCOMOTIVES—Narrow and Standard
Gauge. 150 Locomotives at our shops 6
to 80 tons. Freight and Passenger Cars.

Largest Stock Locomotives
in United States

Southern Iron & Equipment Co.
ATLANTA, GA.

Sweet's Steel Co.

WILLIAMSPORT, PA.

Manufacturers of

Light Steel Rails

12, 16, 20 and 25-lb. Sections. Also
Splices, Bolts, Nuts and Spikes. Our
Rails are first quality. A. S. C. E.
Section, carefully inspected.

Prompt Shipments from Stock

Bedstead Angles and Special Shapes

LOCOMOTIVE WANTED

WANTED.—One second-hand locomotive, rod
type, 36" gauge, 23 to 25 tons, with detachable
tender; also five (5) good logging cars, 36"
gauge, 30,000 pounds capacity.

Va. Lumber & Box Co., Inc., Petersburg, Va.

Georgia Car & Locomotive Co.

ATLANTA, GA.

LOCOMOTIVES, FREIGHT CARS, PASSENGER COACHES

LARGEST STOCK EQUIPMENT IN U. S.

LOCOMOTIVE FOR SALE

60-ton Improved Climax Locomotive, stand-
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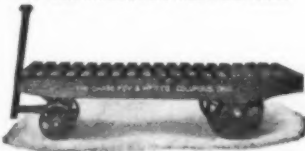


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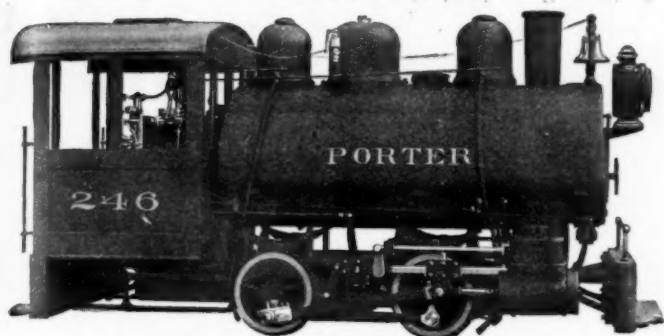
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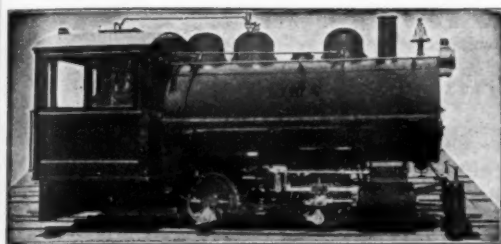
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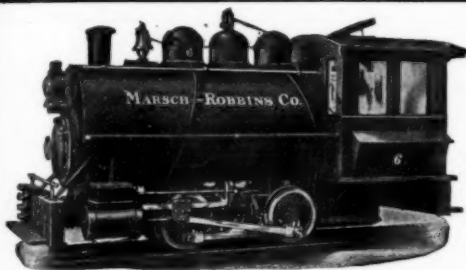
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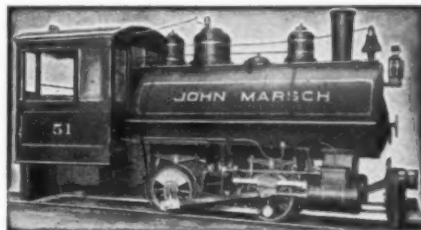
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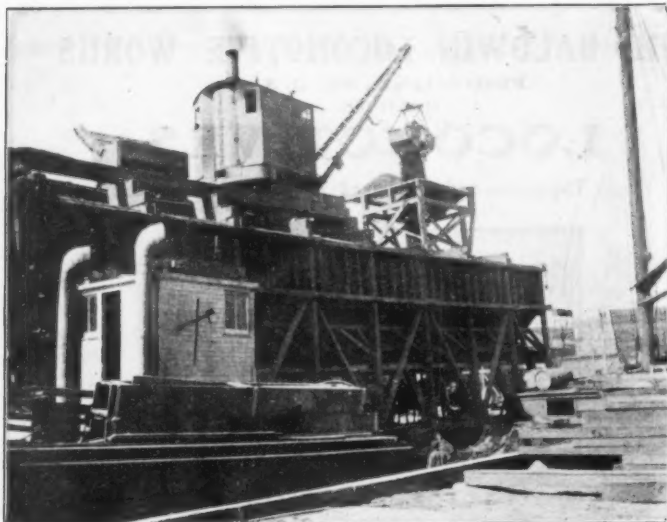
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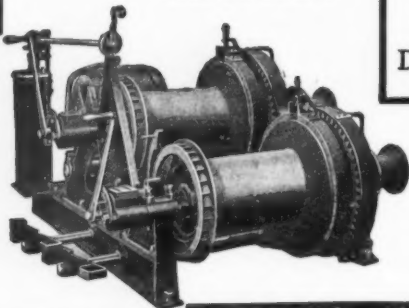
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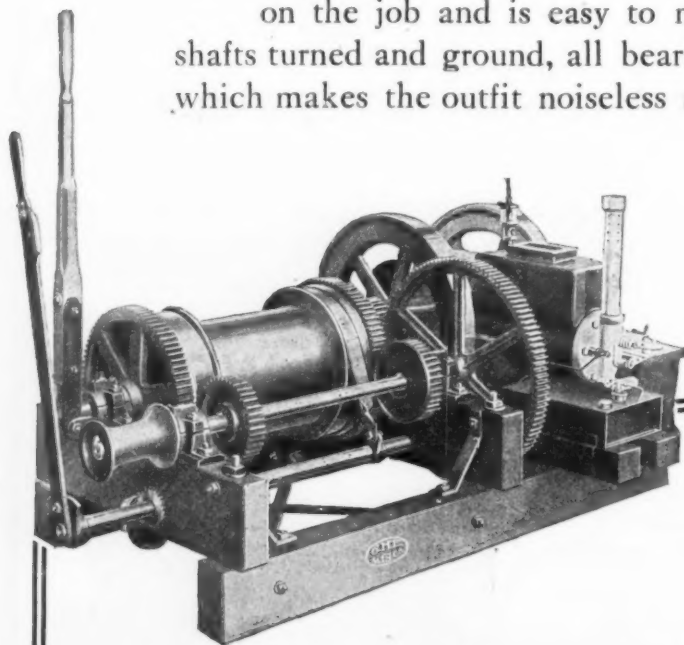
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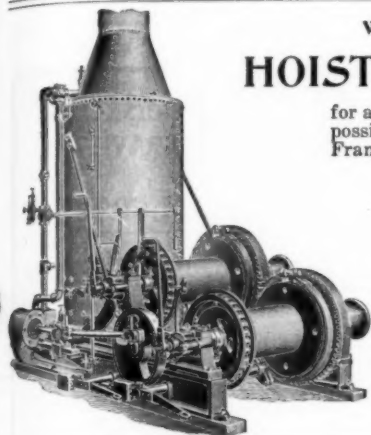
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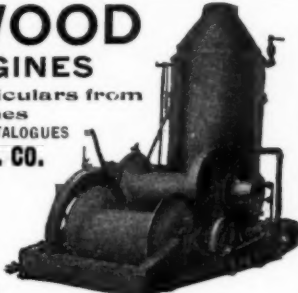
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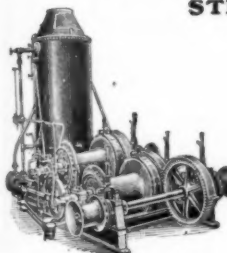
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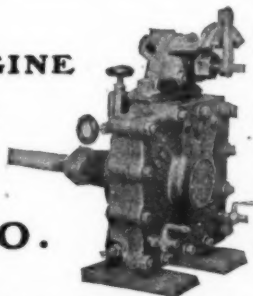
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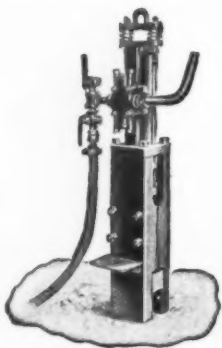
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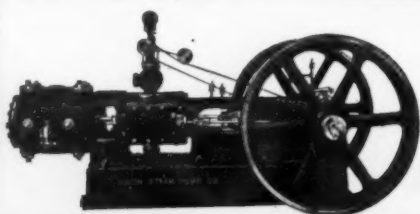
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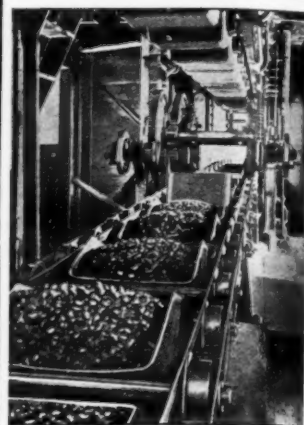
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11 S. FRONT ST., BALTIMORE, MD.

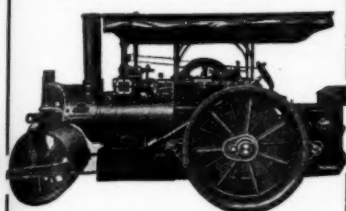
AIR COMPRESSORS IN ALL SIZES

FOR EVERY REQUIREMENT

AMERICAN AIR COMPRESSOR WORKS, 26 Cortlandt St., New York
Agents, Southwestern—REEVES & SKINNER MCH'Y CO., St. Louis, Mo. Catalogue Gratis

Buffalo Pitts Rollers

BUILT FOR SERVICE



Made in all types and sizes

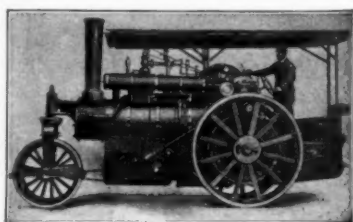
BUFFALO STEAM ROLLER CO.

BUFFALO, N. Y.

THE KELLY-SPRINGFIELD**ROAD ROLLER CO.**

SPRINGFIELD

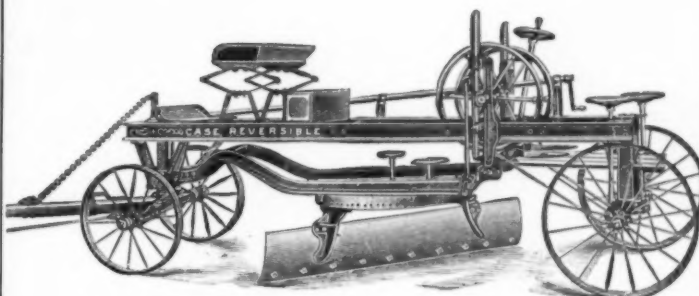
OHIO

**ROAD ROLLERS**ALL TYPES
ALL SIZES

SEND FOR CATALOGUE

STANDS THE WEAR

Case Perfection

Road Scraper

By virtue of its rear axle adjustment and substantial construction it is always equal to severe wear and tear necessarily found in road building. Wears longer than any other you can get. Fills and dumps easily. Backed by the Case name. Catalogue L tells all about it and also about our other road machines. A copy for the asking.

J. I. Case Threshing Machine Co.

(Incorporated)

Racine, Wis.

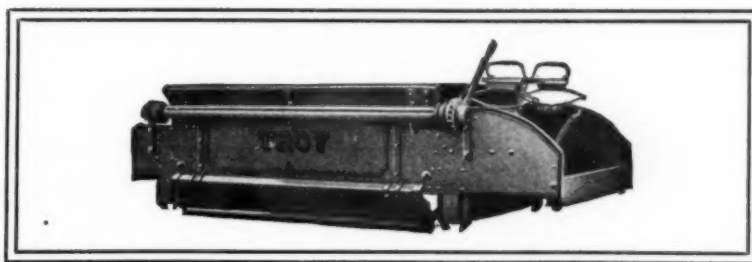
63 branches and 8000 agents at our customers' service.

**The Ruggles-Coles
PORTABLE HEATING PLANT**

For Modern Bituminous Pavements

Capacity—1200 to 1500 square yards of 2-inch surface per day

Town and city officials, paving companies, road contractors, engineers and all others interested in building and maintaining the best and most economical streets and roadways will profit by knowing the actual work of this machinery, and we will be glad to furnish all the necessary information.

Ruggles-Coles Engineering Co. 50 Church Street, NEW YORK
McCormick Building, CHICAGO**Why We Can Afford to Sell 500 Troy Dump Boxes
at a Special Introductory Price**

We want to demonstrate quickly to the largest possible scope of territory the great saving that can be made by the use of TROY Bottom Dump Boxes in connection with regular teaming gears on all dirt-moving jobs.

We want to reach the team owners and contractors who don't know TROY Dump Boxes. Many of them have never seen a TROY and won't believe the saving until they do see.

One TROY Box in a community means an order-getting booster for us. Every sale means more sales and lots of them. That is why we have set aside 500 TROY Boxes for special advertising purposes.

But We Must Limit Purchases Under This Special Proposition to One Box Per Customer

Our regular price for the 1½-yd. Box is \$45.00 each, and for the 2-yd. Box \$50.00.

We will furnish 500 Boxes at the following special advertising price—good only as long as the 500 Boxes last, and no order accepted at these figures after September 1, 1911.

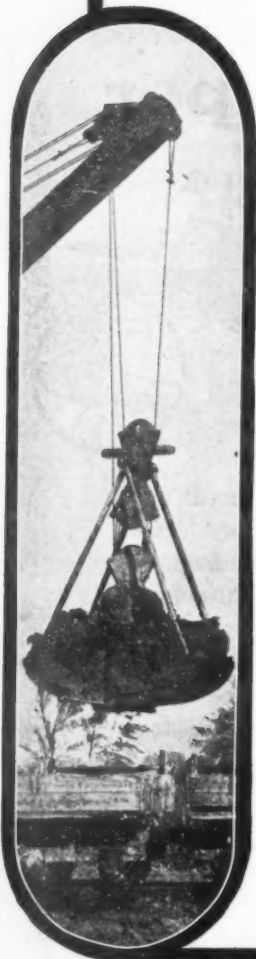
SPECIAL ADVERTISING PRICE, 1½ cu. yd. Box	-	-	-	-	\$36.90 Each
“ “ “ 2 cu. yd. Box	-	-	-	-	40.20 Each

Terms: Net cash with order, F. O. B. Troy, Ohio. Boxes furnished to fit any size gear.

First come, first served. They won't last long. If you want a TROY Box at these figures, MAIL YOUR ORDER TODAY.

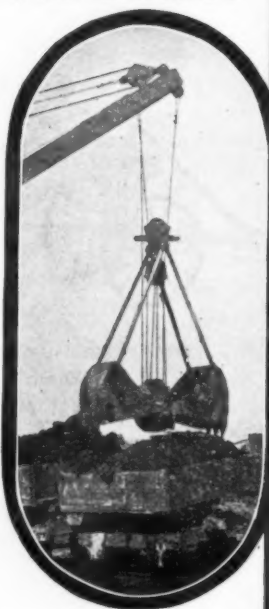
THE TROY WAGON WORKS CO. - - TROY, OHIO

A Bucket That Really Digs The Owen Bucket



has 100 per cent. greater digging power than any other bucket on the market today. The digging power is applied equally to both jaws.

Substantially constructed throughout and fully guaranteed. Try one on your work.



Successfully handles gravel and sand, crushed stone, clay and coal

Write for New Catalog

The Owen Bucket Company
529-531 Rockefeller Bldg., CLEVELAND, OHIO

MEAD-MORRISON MANUFACTURING COMPANY

The Mead-Morrison Orange Peel Grab combines a minimum of working parts with maximum durability, efficiency and capacity. The period of its service is prolonged indefinitely through the use of renewable bronze bushings and renewable steel digging points. Its use is a permanent economy. Mead-Morrison Grabs are also made in Clam Shell and Special Types. Correspondence invited.

Works and Main Office
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NEW YORK, 149 Broadway; CHICAGO, Monadnock Block;
BALTIMORE, 821 Equitable Bldg.; PITTSBURG, 108
Parkway, N. E.; SAN FRANCISCO, Metropolis Bank
Bldg.; NEW ORLEANS, 110 North Peters Street; MON-
TREAL, 286 St. James Street.



Do You Ship Goods To the South?

We can save you the difference between carload and less than carload freight. We give you the advantage of a branch office at nominal expense.

Manufacturers Distributing Agent

CANDLER WAREHOUSE COMPANY
ATLANTA, GA.



The Remarkable Strength of This Bucket Can Be Seen by the Eye

All "Three-Blade" Hayward Orange Peel Buckets are made for extremely heavy duty in digging and re-handling rocks and boulders, but this unusual type is of even heavier and stronger design than the usual "Three-Sided" Bucket.

It does not weigh a bit more, because each blade is cut off at the upper end and the weight thus eliminated is utilized in the shoes which strengthen the points.

Because of the extremely strong shoes on this type of bucket it will meet rougher work than any other on the market, and will outlast any bucket at such work.

The most wonderful digging bucket ever manufactured was a Special Three-Sided Bucket—The Giant Hayward—used in digging the deep-water channel in the Delaware River. A 6-foot man can stand upright in its blades, and with only one man operating, it handles boulders weighing from eight to twenty tons.

There is a Hayward style or size of Bucket for any and every digging and rehandling problem. Your problem is NOT an insoluble one—whatever it is. Write us about it, and our engineers will give their advice free.

80-page Catalog Free on Request.

THE HAYWARD COMPANY

50 Church St.
NEW YORK



American Ingot Iron



THE STANDARD
OF THEIR CLASS

Every year that has passed since the first Culvert was built of American Ingot Iron—and they are not few—has added to the lengthening list of their triumphs in varied fields of usefulness.

In every department of roadway construction—from the country highways to the great railway systems—their use has met with universal success and with unqualified approval.

They have no weak points. Their simple and rigid construction insures ample strength to meet the demands of every form of traffic; while the material from which they are built—American Ingot Iron—the purest iron ever produced in commercial quantities, is a guarantee of their fitness to withstand the power of the elements indefinitely.

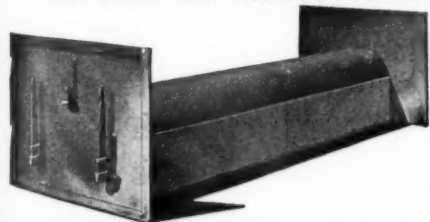
It is certainly to the interest of the prospective user to bear these facts in mind. It is safer to be committed to an article of known quantity than to one unknown.



MANUFACTURED BY

North Carolina Metal Culvert Co.
GREENSBORO, N. C.

SAVE 25 PER CENT **CULVERTS**
IN COST OF CONSTRUCTION **CONDUITS**
SEWERS



**Our Collapsible
Steel Forms
Will do it**

They are the lightest, strongest, easiest handled forms on the market. Not a single failure anywhere. Write for illustrated booklet and full particulars.

CONCRETE FORM & ENGINE CO., 87 Congress St. W., DETROIT, Mich.

American Ingot Iron Road Culverts, Tanks, Roofing and Siding.



Look for the trade mark. It means durability. Don't accept the imitations. We have the proof that our culverts will carry the heaviest loads that travel and will last for years where others fail. Write for Pamphlet A on AMERICAN INGOT IRON and B on culverts and tanks.

The Tennessee Metal Culvert Co., Nashville, Tennessee.

"ACME" NESTABLE CORRUGATED CULVERTS

(PATENTED)

MADE OF

ANTI-CORROSIVE **No-Co-Ro METAL** GALVANIZED SHEETS

1. Culverts...corrugated, anti-corrosive... 16 ga. or 9/128" thick, nested, bolted, knocked down; to be 18' long, one-fourth of car to be 30" and three-fourths 24" culverts. (To be similar and equal to "Acme NoCoRo" culverts of Canton Culvert Co's make)
- 2.
- 3.
- 4.

One branch of the United States Government specifies culverts as shown above.

Follow that plan and you will be assured of securing the best corrugated metal culvert—and culvert material—that money can buy.

No one else can furnish *No-Co-Ro Metal* or a material the equal of *No-Co-Ro Metal*.

Send for our literature on "Acmes" and "No-Co-Ro" Metal.

THE CANTON CULVERT CO.
SOLE MANUFACTURERS
CANTON, OHIO, U.S.A.

This American Ingot Iron Corrugated Culvert



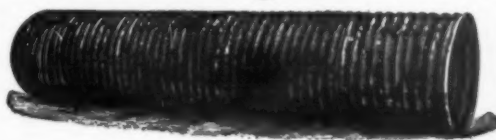
60-inch by 26-foot

is placed under the National Highway between New York and Atlanta. It takes the place of a 16-foot bridge at half the cost. It looks better and will last a life-time without repairs. American Ingot Iron Corrugated Culverts are made and sold by

**The Dixie Culvert
& Metal Co.**

Atlanta, Ga., and Little Rock, Ark.

These Corrugated Metal Culverts



**STAND THE
STRAIN**

The heaviest loads do not affect them. Carefully made and thoroughly tested before shipped.

Made of "American Ingot" Iron, they cannot rust. They make a permanent installation. They cost less than wood and are safer than their imitators. Used by the biggest railroads and the best road engineers. Write for "Book of Tests."

KENTUCKY CULVERT MFG. CO.

BUECHEL, KY.

USE IS WHAT TELLS THEN LET US QUOTE YOU
READ EVERY WORD



"80 EAGLES"

Brown Station, N. Y.,
Feb. 18, 1909.
Eagle Wagon Works,
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Dear Sirs—We enclose herewith order for 20 two-yard Eagle Dump Wagons, similar to the 60 we have already bought from you. Yours truly,
MACARTHUR BROS. CO.
AND WINSTON CO.

Eagle Wagon Works
Auburn, N. Y.

STANDARD Road Oil

Specially Prepared for
Road Construction and Road Maintenance

Asphalt Road Oil In four grades, containing from 30% to 60% asphaltum. For use on well-made roads as they are. One application usually lasts a season.

Emulsifying Road Oil A lighter asphaltic oil, prepared to mix readily with water. Particularly serviceable as a dust preventive for parks, private estates, boulevards, etc. Requires frequent application where traffic is heavy.

Macadam Asphalt Binder Almost solid asphaltum, used in constructing macadam and all other roads where asphaltic material is needed.

New Illustrated Book Free

We will mail you free, upon request, our new Standard Road Oil Book, 48 pages, profusely illustrated. It explains the particular uses for which the different oils are prepared, and how they should be applied to give the best results.

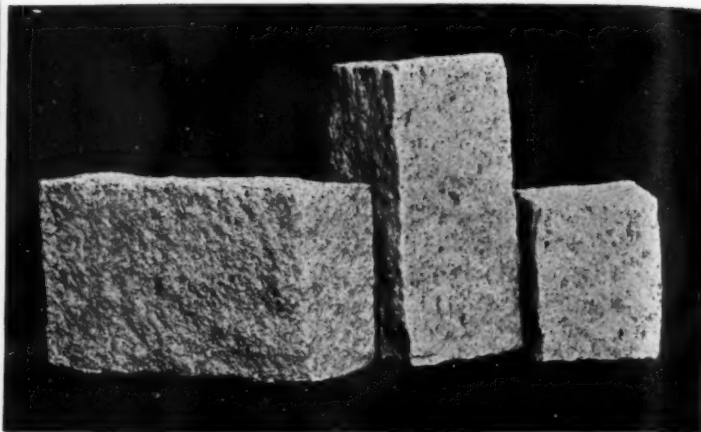
The information this book contains will be found invaluable to Supervisors, Road Commissioners, State and Municipal authorities, and to owners of private estates.



Standard Oil Company, Road Oil Department
Baltimore, Md. Norfolk, Va. Washington, D. C.
Richmond, Va. Charlotte, N. C.

Balfour Improved Dressed Granite Blocks

"JUST AS THEY ARE"



BUY Granite Paving Blocks like you buy other material—ON MERIT.

Our Blocks resist compression to 50,000 lbs. per square inch, by U. S. Official tests. The Coefficient of wear is 20.8.

Get U. S. Certified figures of this nature on all granites and then contract for the BEST.

The Harris Granite Quarries Company
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YOU SHOULD READ OUR BOOKLET, "GRANITE." YOU NEED THE INFORMATION IT CONTAINS. A POST CARD BRINGS IT.

The best test of **VITRIFIED PAVING BRICK** is service. Our paving blocks are laid in streets where they are giving perfect service after eighteen years' wear.



Southern Clay Manufacturing Co., Chattanooga, Tenn.
Three Factories—Annual Capacity, Thirty Millions Paving Block.

HIGH GRADE PAVING BRICK

Guaranteed to stand 18% standard test

THE CARLYLE PAVING BRICK CO.

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HIGH- GRADE PAVING BRICK

COPELAND-INGLIS SHALE BRICK CO., MFRS.

Office—610 First Nat. Bank Bldg.

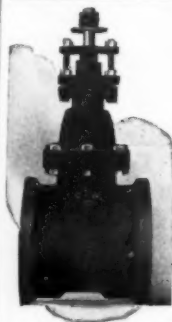
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For all road, and street and outdoor advertising purposes. The letters are cut into wood or any of the metals by a new automatic lettering machine, that reduces the cost one-half. The finish is in cement and looks like the enameled sign, but will last forever. Any size from 3 1/2 x 2 1/2" to 12 x 48". In steel, iron, brass, copper or wood. Patterns for cast brass or iron signs made by the same machine at the same low cost. Send for illustrated circular and price list.

INDESTRUCTIBLE SIGN COMPANY

BISHOPVILLE, S. C.



COLUMBIAN IRON WORKS CHATTANOOGA, TENN.

MANUFACTURERS OF

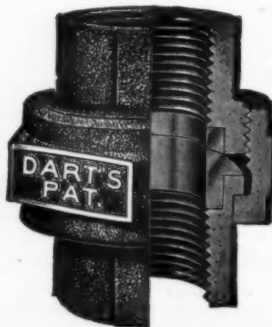
Fire Hydrants, Valves, Valve Boxes,
Sluice Gates, Meter Boxes and
Water Works Supplies

Also Municipal and Building Castings

ESTIMATES PROMPTLY FURNISHED

DART UNIONS

Have Bronze to Bronze at the
Joint—No Corrosion



This construction is embodied in our Flange Elbow, Tee, Male and Female and Air Pump Unions. Ask for circular and sample.

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PROVIDENCE, R. I.

THE FAIRBANKS CO., Agents

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S. MORGAN SMITH CO., York, Pa.

Hydraulic Engineers.

MANUFACTURERS OF

MCCORMICK TURBINES.

See Illustrated ad. in last and next issues.
Branch Offices—176 Federal St., Boston.
Chicago Office, 644 American Trust Bldg.

Do You
Spend Your
Own Time



on Sundays, Holidays or after working hours when the plant is shut down, fixing up a lot of leaky unions? You don't need to. Buy the "Leakless" Union—the "KEWANE" UNION—the tested union—and you will have no more leaks to trouble you at a cost of your own time. Ask for the booklet *The Whole "Kewanee" Family.*

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Cast Iron PIPE

in all regular sizes, 3 inch to 84 inch

FOR
WATER SEWERAGE CULVERTS
GAS DRAINS Etc.

FLANGED PIPE FLEXIBLE JOINT PIPE
SPECIAL CASTINGS LARGE CYLINDERS
HEAVY CASTINGS

United States Cast Iron Pipe & Foundry Co.

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AMERICAN CAST IRON PIPE CO.

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ENGINEERS AND CONTRACTORS FOR

WATER-WORKS

No. 112 NORTH BROAD STREET, PHILADELPHIA

Manufacturers of PHIPPS' HYDRAULIC PIPE



Trade Mark

"LEADITE"

Registered U. S. Pat. Office

For WATER WORKS

Makes a permanently tight joint without caulking at about half the cost of lead.

Joints made with "Leadite" over 15 years ago have never leaked. Unaffected by expansion, contraction, electrolysis or vibration.

Write for reports of tests, endorsements and prices. Write today.

THE LEADITE CO., Inc.

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British Representative: H. S. Dickinson, 42 Union St., Bradford, York., Eng.



The Bourbon Copper and Brass Works Company

MANUFACTURERS OF

FIRE HYDRANTS and STOP VALVES

Water Works and Fire Department
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Long Distance Phone, Canal 3297. 616 and 620 E. Front St., Cincinnati, O.



It Carries More Water For Its Diameter Than Any Iron Pipe

WYCKOFF WOOD PIPE is not impaired by the effects of electrolysis, acid fumes or corrosion. It is light, strong and very durable. Lengths, 6 ft. to 12 ft. long. Size for size, it carries 14% more water than iron pipe. Costs less for transportation, because it is lighter and easier to handle. May we send Catalog giving fullest details?

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Established 1855

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Oklahoma and Texas Sales Office, 911 Praetorian Bldg., DALLAS, TEX.

THE MOST PRACTICAL ALL-STEEL PIPE



TAYLOR'S SPIRAL RIVETED PIPE

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AMERICAN SPIRAL PIPE WORKS

New York Office, 50 Church St.

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for Irrigation, Hydraulic Mining Dredging, Steam Exhaust, Water Supply Lines, etc. Substantially constructed. Fitted with forged steel connections. Hundreds of miles in use. Sizes 3" to 42" diameter.

Glamorgan Pipe & Foundry Co., Lynchburg, Va.

Manufacturers of Cast Iron Water and Gas Pipe, Special Castings, Flange Pipe and Flanged Specials. Gate and Compression Hydrants, Water, Gas and Steam Valves.



CAST IRON PIPE

GENERAL
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MACHINISTS

Don't tear up streets

hunting pipe

It's expensive and unnecessary

The D. B. M. Wireless
Pipe Locator

will find the exact location of metal pipes under ground, no matter how deeply they're buried, nor what they're covered with. Write for 10 days' free trial offer.

MODERN IRON WORKS CO. QUINCY, ILL.



DOWNIE DOUBLE STROKE DEEP WELL PUMPS

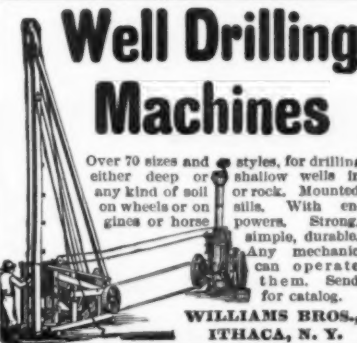


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No Poisonous Matter
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IN DRILLED WELLS
and we drill them.
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Well Drilling Machines

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on gins or horse powers. Strong, simple, durable. Any mechanic can operate them. Send for catalog.

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Highest efficiency
Both CYLINDER and REGISTER gate
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Davis Foundry & Machine Works ROME, GA.

The Cook Well Co.

No. 13 S. 4th St.
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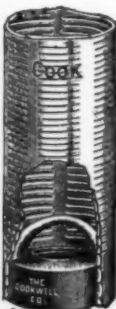
Cook's System of Wells

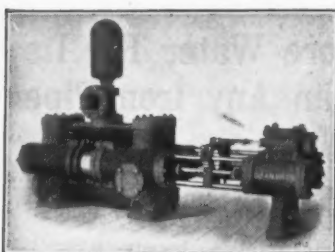
For Cities, Towns, Villages, Railroads, Ice Plants, Breweries and Manufactories.

COOK'S PATENT BRASS TUBE WELL STRAINER

COOK'S DEEP WELL PUMPING ENGINES

Estimates furnished upon application.
Write for catalogue and prices.





Duplex Plunger Boiler Feeder
We have produced several new lines of pump patterns, among them are heavy Boiler Feeders and Water Supply Pumps. Write for our Catalogue.
Steel Forged HYDRAULIC PUMPS
Jet and Surface CONDENSERS

DEAN BROS. STEAM PUMP WORKS.
INDIANAPOLIS.
NOT IN THE PUMP TRUST.

BLAKESLEE JET PUMPS

None Genuine Without Trade Mark



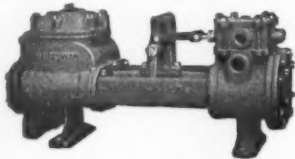
All parts inter-changeable
---Most economical and reliable---Freezing does not injure it as it is self draining.
Send for Latest Price List and Catalogue

Has No Valves---
Cannot wear out---
Pumps Sandy or dirty water equally well---Entirely Independent of Engine---
Perfectly Simple

BLAKESLEE MANUFACTURING CO.
72 Du Quoin St., Du Quoin, Illinois

If You Want a Good Pump

Single, Duplex, Rotative
OR
Compound or Triple Expansion



PUMPING ENGINES

WRITE
THE JOHN H. MCGOWAN CO.
CINCINNATI, O.



Take off your Hat to the

Well Pumps, Power Pumps,
Tank Pumps, Spray Pumps
With Glass Valve Seat
A Line Without an Equal
on the Globe

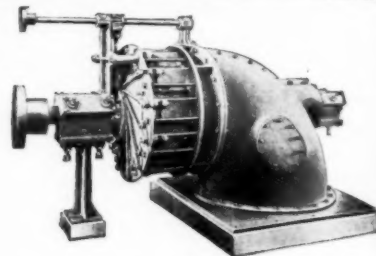
Write for Circulars and Prices to
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ASHLAND, OHIO, U. S. A.

MYERS

The Pump that **PUMPS** **HAY** **BARNDOR HANGERS** **TOOLS** **HAY RACK** **CLAMPS**

SAMSON WATER TURBINE

We build these turbines in all SIZES and STYLES, on UPRIGHT or HORIZONTAL shafts, BELTED or DIRECT CONNECTED, SINGLE or in PAIRS. They are suitable for direct connecting to GENERATORS, AIR COMPRESSORS, PUMPS or other machinery driven on horizontal shafting.

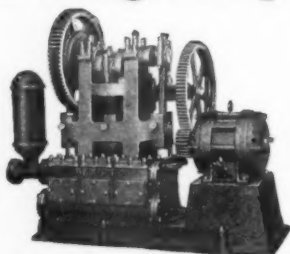


JAMES LEFFEL & CO., 310 Lagonda St., Springfield, Ohio, U. S. A.

TRUMP TURBINES

Built in All Sizes and Capacities **Water Power** Machinery to Suit Your Requirements
THE TRUMP COMPANY - - Springfield, Ohio

Deming Pumps



Deming Triplex Power Pump direct connected to electric motor.

Ask for our general Catalogue of hand, wind-mill, power and spray pumps, or write us your specifications.

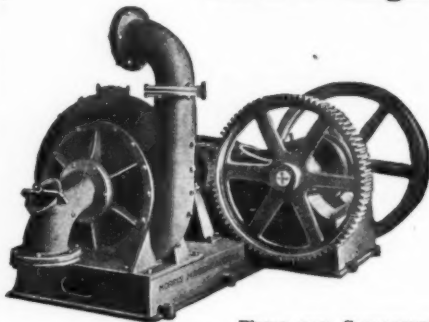
The Deming Company
SALEM OHIO
HAND AND POWER PUMPS

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BALDWINVILLE, N. Y.

Centrifugal Pumping Machinery and Steam Engines



Specially Designed
PUMPS

FOR

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Rice Irrigation,
Cotton Mills,
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H. A. PAINE, Agent, Houston, Tex. J. H. MURPHY, Agent, New Orleans, La.

R. D. WOOD & CO.

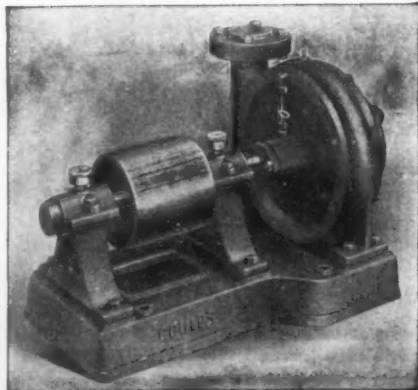
400 Chestnut Street, Philadelphia, Pa.

CENTRIFUGAL PUMPS

ALL SIZES. BELT DRIVEN AND DIRECT CONNECTED

For Irrigation, Tanneries, Mine Drainage, Phosphate Mining,
Circulating Water for Condensers, &c., &c.

GOULDS CENTRIFUGAL PUMPS

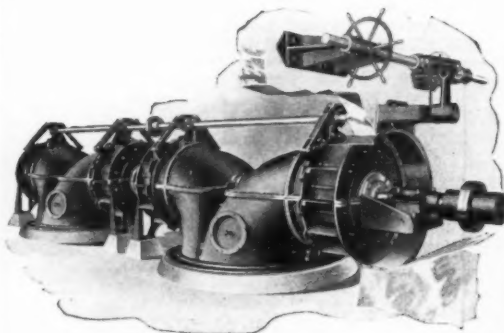


Include types for every class of pumping. They are built for hard service and to meet the most exacting requirements.

Catalog on request.

THE GOULDS MFG. CO.

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New York Boston
Branches in all large cities



**New
American
Turbines**

And Appurtenances Produce Better Results than
any other water-power equipment on the market.

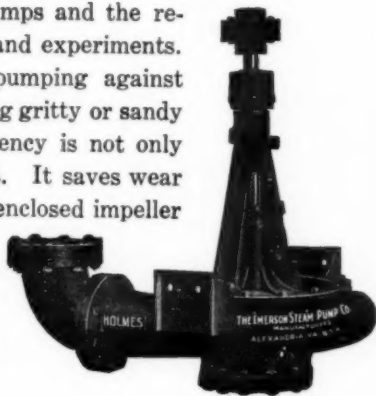
Many plants owe their constant operation and low maintenance cost to the substantial construction of our machinery.

Send for Catalog No. 16.

THE DAYTON GLOBE IRON WORKS CO.
DAYTON, OHIO

The Best and Cheapest Pumping IS DONE BY THE Open Impeller Type Holmes Centrifugal Pump

It is a departure in pumps and the result of years of tests and experiments. Just the thing for pumping against high heads, or pumping gritty or sandy liquids; and the efficiency is not only high, *but remains high*. It saves wear and power where the enclosed impeller type fails. It's as low in price as other first-class pumps of same capacity and head. Made for horizontal or vertical shaft, single or multi-stage.



Send for Bulletin 1-D. Confer with us about your pumping problem.

Emerson Steam Pump Co.
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The Slogan of the Cameron—"Character: The Grandest Thing"

Cameron Pumps

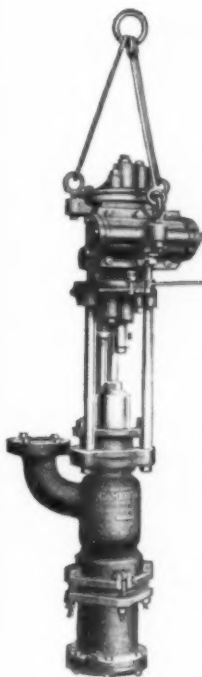
**Large Capacity and
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You can get the largest capacity from the most limited space easily, successfully and economically by the use of the CAMERON DIFFERENTIAL PLUNGER PUMP, illustrated herewith.

This pump has liberal valve area, and as the flow of the water is in one direction the frictional resistance is reduced, and the accumulation of sediment over the valves is prevented.

It is a very strong, simple pump; light in weight, easy to operate, and will stand the hardest kind of service with the least attention and care.

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Ejectors especially adapted for Municipal Installations

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Let us know your requirements and we will place our engineering department at your disposal, giving you the benefit of their vast experience in this line.

We also manufacture Air and Gas Compressors, Vacuum Cleaning Systems, Gas Engines to 500 H. P.

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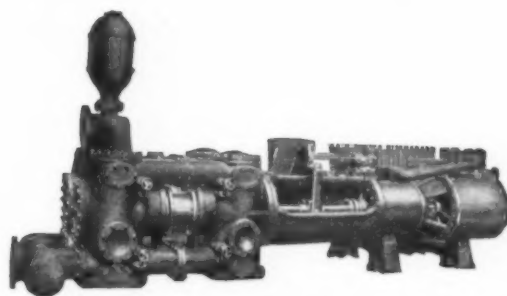
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PUMPS FOR EVERY SERVICE

THE Worthington Compound Packed Plunger Pump is designed for heavy duty where continuity of service is essential.

This type of pump is admirably adapted for Water Works, Hydraulic Elevator and Mill Service, or for use where a pump that is dependable under severe working conditions is necessary.

Write for Catalogue W17029.

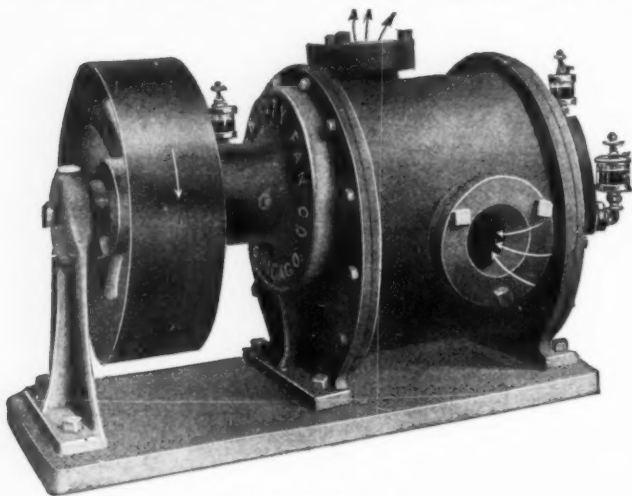
General Office: 115 Broadway, New York.



W21.2

Garden City High Pressure Positive Blower

Gives the Highest Pressure or Vacuum Obtainable With a Rotary Blower



Patented March 12, 1907.

Noiseless in Operation. Has No Gears. Durability and Efficiency Unequaled. "Not as Good, But Better"

SUITABLE FOR FUEL OIL FURNACES, GAS FURNACES, SAND BLAST, PNEUMATIC CARRIERS, VACUUM CLEANERS, AGITATING LIQUIDS, WATER FILTERS.

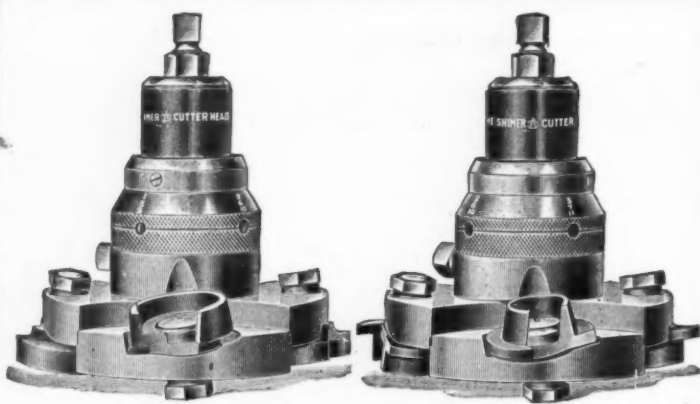
and all purposes where a strong pressure or vacuum is required.

SAVES 15% in power over any high pressure or positive blower. Requires less floor space, runs in perfect balance. Has no internal intermeshing parts that require frequent and expensive repairs. Guaranteed for a lifetime against imperfections. Hundreds of them in successful use.

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1532 McCORMICK BUILDING
Established 1879

CHICAGO
Get Catalog No. 29



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For Flooring, Ceiling, Siding, Ship Lap, Jointing, Double Ceiling, Doors, Sash, Blinds, etc.

Made of Steel Forgings, they represent the greatest possible strength in compact and workmanlike manner, embodying the vital principles of clearance to all leading Bit Points. The alternate and shearing effect of the cut reduces to a minimum the tearing-out tendency of cross-grained lumber. Cutters have exact shape in their exterior circles, and uniform product is maintained indefinitely without extra trouble or expense.

The Shimer Cutter Head is made in a number of different styles, for the most exacting requirements, and to meet the views of the experienced machine operator.

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Send for Catalogue and Pattern Book. Address

SAMUEL J. SHIMER & SONS
MILTON, PENNSYLVANIA

CHAPTER NO. 4

LANE SAW MILL SPECIALTIES

The Lane Lever Set Works:

The Setting Device invented by Denis Lane has doubtless done more than any other one thing to build up the enviable reputation of Lane Circular Saw Mills, for it is so designed that not only is it accurate and perfect working when new, but can be maintained in that condition even when much worn. And after the saw and its mandrel there is no other part of a mill so important as the Set Works.

With a single exception all our Sets are regularly built to set to sixteenths, and at a slight extra cost we can build them with cut steel wheels and pawls to set to thirty-seconds, or by millimeters.

A set-beam carrying the uprights and dogging devices is part of all our Set Works, the set shaft being carried in bearings attached to this beam and working back and forth on the headblocks, having pinions engaging adjustable racks on the sides of these headblocks. This construction insures perfect alignment of all the uprights, and allows frequent support for the logs—both vertical and horizontal—without unduly increasing the weight of the Carriage.

We can make all except our smallest Mills with the Set Works arranged to be operated by a setter riding the Carriage when so ordered, tho a Sawyer's set is generally preferred for ordinary conditions.

A Power Receding Device is also a part of all our Set Works except the three smallest sizes, arranged to be operated by the Sawyer ordinarily, or by the Setter when the Mill has a Back-Setting Device. This device can be used both for advancing and withdrawing the uprights, thus effecting a great saving in time when setting for thick material.

On our largest mills the Headblocks are steel faced and reinforced, and our No. 4 Mill has the set pinions and racks with cut teeth.

On our Back Setting Device the throw of the lever is lengthwise of the Carriage, thus giving the setter the help of the natural swing and throw of his body in setting up a large and heavy log.

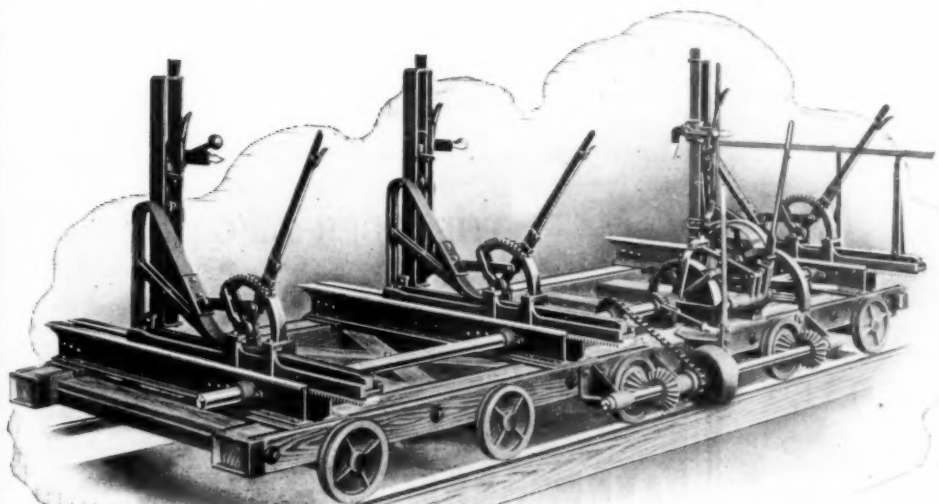
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Montpelier, Vt.

WHEN YOU WANT REAL, PROVEN QUALITY IN SAW MILL MACHINERY

let us hear from you. Our reputation and ever-expanding business have been built on quality. We make a full line of Saw Mill Machinery which invariably reduces cost of production and increases accuracy of product.

We know just what a first-class mill needs, for we have been studying Saw Mill requirements, and successfully designing and building Saw Mill Machinery, for many years.



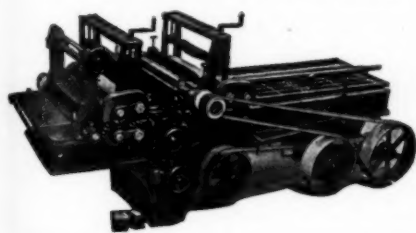
Our size "W" Mill shown here-with. Designed for heavy duty. Very accurate. Very substantially constructed.

Let us acquaint you with the Knight Line.

Questions promptly answered and interesting illustrated catalogue sent on application to Dept. 1815.

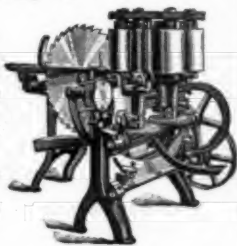
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Manufacturing Co.
CANTON, OHIO

Manufacturers of Planers, Gang Edgers, Resaw Machines, Saw Mills
J. A. VANCE & CO., SALEM, N. C.



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the
Southern
States.

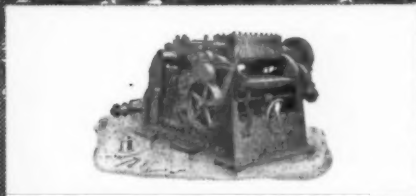
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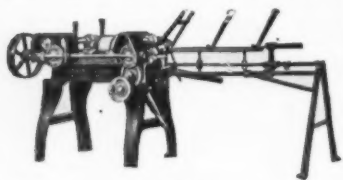
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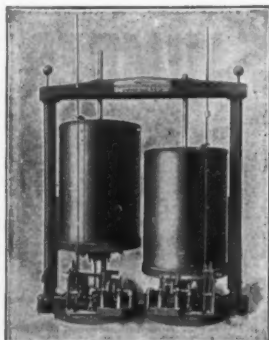
COTTONSEED OIL MILL

AND

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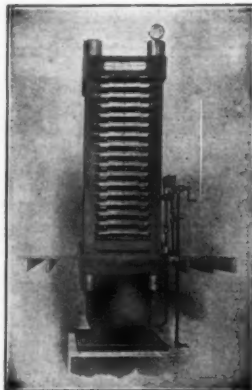
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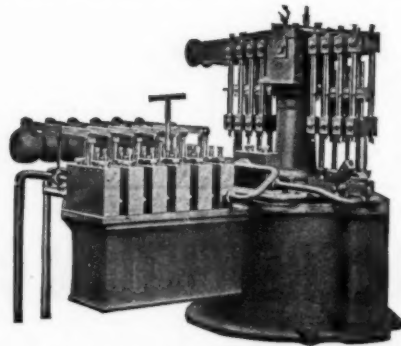
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POWER HYDRAULIC PUMP



This pump operates presses direct from each individual check
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 Can be operated through change valves at the presses when
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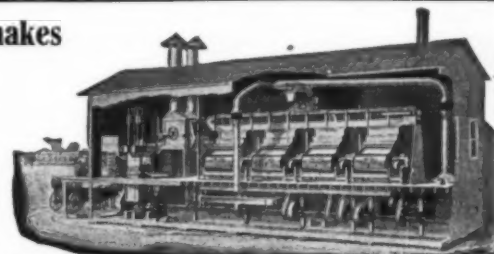
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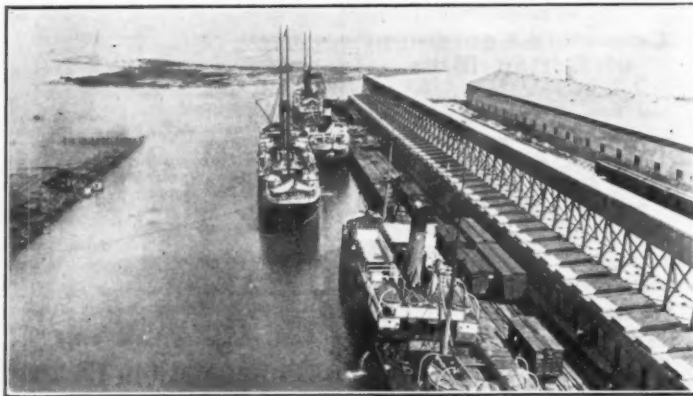
Lands are reasonable in price, very fertile and adaptable to the
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When it is considered that the volume of business for the port of Texas City has more than doubled every year since the first year it was opened to commerce, it is conceivable that its promoters were justified in their belief that here is the logical location for an entrepot for the commerce of the world.

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THE advantages for manufacturers, as an investigation will readily disclose, are nowhere better than at Texas City, Texas. First, no matter what the article you manufacture, the raw material may be found at Texas City or its immediate vicinity, and the means afforded for cheap and convenient transportation for both the raw material and the finished product. Second, by reason of its location and its excellent rail and water transportation facilities (now recognized as the most modern in the entire South), the manufacturer is placed in direct communication with the markets of the world; and third, a non-competitive field in a zone where the people are progressive and will extend every encouragement consistent with reason. Don't you think you ought to investigate this further?

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Texas City Transportation Co.**Texas City, Texas**

For the Manufacturer or Wholesaler FAYETTEVILLE, N. C.

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Available Factory Sites. Abundance of Raw Material and Good Transportation Facilities.

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Abundance of Cheap Power

Along the Clinchfield Route

Whether your plant is driven by steam or electricity the Clinchfield can offer you sites where power can be developed at the lowest possible cost.

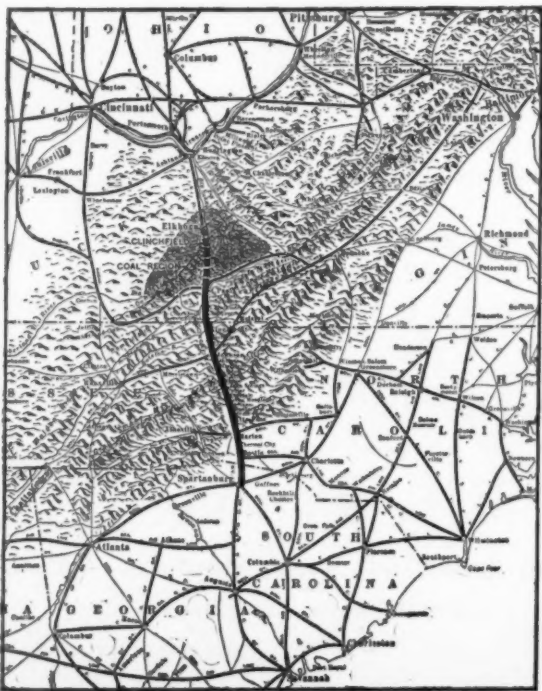
Throughout that section of the Appalachian South traversed by the Clinchfield are rivers which offer splendid opportunities for hydro-electric developments ranging from 250 H. P. up.

Many of these sites have been especially examined by a hydraulic engineer and reports and maps have been prepared to cover the character of each site, the amount of horse-power available and the approximate cost of construction.

In addition, the enormous coal fields of the Clinchfield Coal Corporation are situated at the north end of the Clinchfield Route, thereby insuring a plentiful supply of high-grade coal at comparatively low cost.

Consequently, a manufacturer locating on the Clinchfield Route can obtain an abundance of power at low cost—a most important factor in industrial operations.

To cheap power add the availability of such important raw materials as cotton, hardwoods, various mineral deposits, the products of farm and orchard, abundance of white labor, a most healthful climate and large consuming markets within easy reach, and where can be found more ideal conditions for economical and profitable manufacture?



Detailed information regarding industrial locations will be gladly furnished. Send for our booklet, "The Land of Opportunities," which outlines the resources of the remarkable country along the Clinchfield Route.

Carolina, Clinchfield & Ohio Rwy.

"THE ROAD OF OPPORTUNITY"

J. J. Campion,
V.-P. and Traffic Manager

R. F. Brewer,
Industrial Agent

Johnson City, Tenn.

Through the Heart of America the B. & O. Runs

In 1790 the center of the population of the United States was near Baltimore; since that time it has gradually moved westward until now it is in Southern Indiana.

But at no time has it been more than 50 miles from the line of the Baltimore & Ohio Railroad, extending from Baltimore to St. Louis.

The Baltimore & Ohio Railroad has therefore always been in the very heart of the country, and the territory contiguous to its main and branch lines today teems with millions of people and the industrial activity of a great nation.

Moreover, the Baltimore & Ohio Railroad has kept pace with the remarkable advancement of the country. From the beginning as the pioneer road of America in 1827 it has gradually extended its lines, until today they reach out over 12 States, and connect such cities as New York, Chicago, Philadelphia, St. Louis, Baltimore, Pittsburg, Cleveland, Cincinnati, Louisville, the greatest in the Union.

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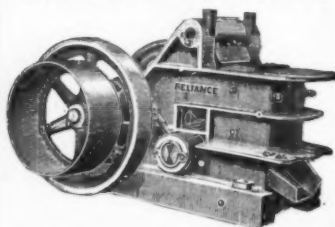
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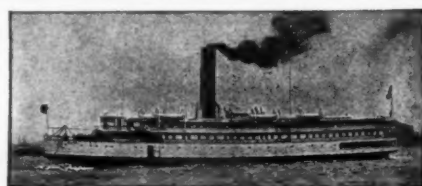
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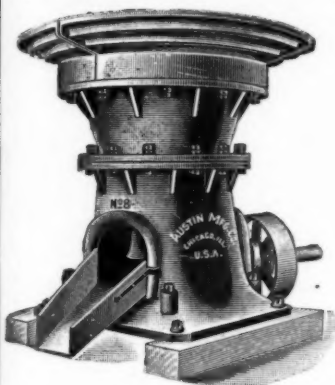
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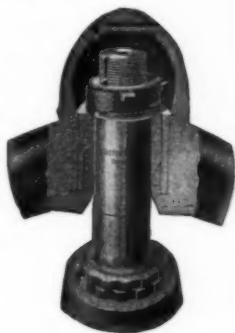
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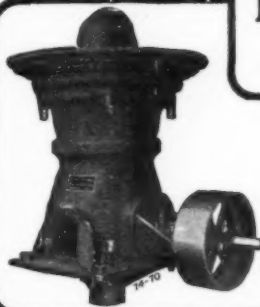
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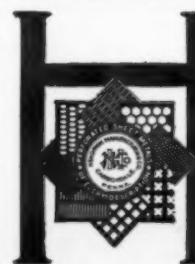
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Vincennes Bridge Co., Vincennes, Ind.
Virginia Bridge & Iron Co., Roanoke, Va.
York Bridge Co., York, Pa.

Bridge and Structural Iron Paints.

Carolina Portland Cement Co., Charleston, S. C.
Chattanooga Paint Co., Chattanooga, Tenn.
Detroit Graphite Co., Detroit, Mich.
Dixon Crucible Co., Joseph, Jersey City, N. J.
Maryland Steel Co., Sparrows Point, Md.
Standard Paint Co., New York, N. Y.

Brimstone.

Union Sulphur Co., New York, N. Y.

Buckets. (Excavators.)

Browning Mfg. Co., Mansfield, O.
Hayward Co., New York, N. Y.
Monaghan Mch. Co., Chicago, Ill.
Owen Bucket Co., Cleveland, O.
Williams Co., The, G. H., Cleveland, O.

Buckets. (Ore, etc.)

Brown Holsting Mch. Co., Cleveland, O.
Browning Mfg. Co., Mansfield, O.
Caldwell & Son Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Milwaukee, Ind.
Hayward Co., New York, N. Y.
Link-Belt Co., Nictown (Philadelphia), Pa.
Owen Bucket Co., Cleveland, O.
Williams Co., The, G. H., Cleveland, O.

Buhr Stones.

Starr Co., B. F., Baltimore, Md.

Buildings and Contractors.

Falls City Construction Co., Louisville, Ky.
Farris Bridge Co., Pittsburg, Pa.
Ferro Concrete Construction Co., Cincinnati, O.
Raymond Concrete Pile Co., New York, N. Y.
Selden-Breck Construction Co., St. Louis, Mo.
Upton-Smoet Construction Co., Washington, D. C.
White & Co., J. G., New York, N. Y.

Buildings. (Financed.)

Falls City Construction Co., Louisville, Ky.

Building Supplies.

Armstrong Mfg. Co., Richmond, Va.
Birch, Chas. & R. O., Atlanta, Ga.
Carolina Portland Cement Co., Charleston, S. C.
Chicago House Vreeling Co., Chicago, Ill.
Southeastern Lime & Cement Co., Charleston, S. C.
Southern Building Material Co., Norfolk, Va.
Southern Steel Products Co., Inc., Richmond, Va.

Burlap-Inserted Roofing and Siding. (Flexible Cement.)

Berningham & Seaman Co., Chicago, Ill.

Burners. (Oil.) [See Fuel Oil Equipments.]

Bushings. (Oilless, for Loose Pulleys.)

North Amer. Metaline Co., Long Island City, N. Y.

Cables.

American Steel & Wire Co., Chicago, Ill.
Broderick & Bascom Rope Co., St. Louis, Mo.
Roebing's Sons Co., John A., Trenton, N. J.
Williamsport Wire Rope Co., Williamsport, Pa.

Cableways. (Overhead Suspension.)

Broderick & Bascom Rope Co., St. Louis, Mo.
Flory Mfg. Co., S., Bangor, Pa.
Lidgerwood Mfg. Co., New York, N. Y.
Mead-Morrison Mfg. Co., Cambridgeport, Mass.
Roebing's Sons Co., John A., Trenton, N. J.

Can and Box Making Machinery. (Tin.)

Bliss Co., B. W., Brooklyn, N. Y.

Cans.

New Orleans Rfg. & Metal Wks., New Orleans, La.
Southern Can Co., Baltimore, Md.
United States Can Co., Cincinnati, O.

Canning Machinery and Supplies.

Canners & Packers' Supply Co., Baltimore, Md.
Robins & Co., A. K., Baltimore, Md.
Sinclair-Scott Co., Baltimore, Md.
Sprague Canning Machinery Co., Chicago, Ill.

Carborundum Paper and Cloth.

Carborundum Co., Niagara Falls, N. Y.

Card Clothing.

American Supply Co., Providence, R. I.

Cars. (Dump, Industrial Logging and Mine.)

Austin Mfg. Co., Chicago, Ill.
Baldwin Equipment & Supply Co., Chicago, Ill.
Cluse Fdry. & Mfg. Co., Columbus, O.
Electric Wheel Co., Quincy, Ill.
Georgia Car & Locomotive Co., Atlanta, Ga.
Hunt Co., C. W., West New Brighton, N. Y.
Kilbourne & Jacobs Mfg. Co., Columbus, O.
Miles Co., The, Cincinnati, O.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.
Raleigh Iron Works Co., Raleigh, N. C.
Union Iron Works, Selma, Ala.

Cars. (Passenger and Freight.) [See Railroad Equipment and Supplies.]**Car Couplers and Knuckles.**

Safety Car H't'g & L'ght'g Co., New York, N. Y.

Car Lighting and Heating.

Safety Car H't'g & L'ght'g Co., New York, N. Y.

Car Wheels, Axles and Trucks.

Carnegie Steel Co., Pittsburg, Pa.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.
Union Iron Works, Selma, Ala.

Casters.

Clark Co., Geo. P., Windsor Locks, Conn.

Castings. (Aluminum.)

Aluminum Company of America, Pittsburgh, Pa.
Gilbert & Sons Brass Fdry. Co., A., St. Louis, Mo.

Castings. (Brass and Bronze.)

Gilbert & Sons Brass Fdry. Co., A., St. Louis, Mo.
Phosphor-Bronze Smelting Co., Phila., Pa.
Richmond Machine Works, Inc., Richmond

Coal Cutters.

Jagers-Rand Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
McKernan-Terry Drill Co., New York, N. Y.

Coal Handling Machinery.

Bartlett & Snow Co., C. O., Cleveland, O.
Brown Hoisting Mch. Co., Cleveland, O.
Hayward Co., New York, N. Y.
Hunt Co., C. W., West New Brighton, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Co., Nictown (Philadelphia), Pa.
Mead-Morrison Mfg. Co., Cambridgeport, Mass.
Robins Conveying Belt Co., New York, N. Y.
Williams Co., The G. H., Cleveland, O.

Coal Tar and By-Products.

Barrett Mfg. Co., Philadelphia, Pa.
Carolina Portland Cement Co., Charleston, S. C.

Coke.

Alabama Coal and Iron Co., Birmingham, Ala.
Flat Top Fuel Co., Bluefield, W. Va.
Hickman, Williams & Co., Chicago, Ill.
Bagers, Brown & Co., Cincinnati, O.
Tennessee Coal, Iron & R. R. Co., B'gh'm, Ala.
Yolande Coal & Coke Co., Birmingham, Ala.

Collapsible Steel Forms. (For Concrete Work.)
Concrete Form & Engine Co., Detroit, Mich.

Concrete Construction. (Steel Reinforcement.)

American Steel & Wire Co., Chicago, Ill.
American System of Reinforcing, Chicago, Ill.
Brown Hoisting Machinery Co., Cleveland, O.
Clinton Wire Cloth Co., Clinton, Mass.
Concrete-Steel Co., The, New York, N. Y.
Concrete Steel Engineering Co., New York, N. Y.
Corrugated Bar Co., St. Louis, Mo.
Ferro Concrete Construction Co., Cincinnati, O.
Foster-Creighton-Gould Co., Nashville, Tenn.
Jeffrey Mfg. Co., Columbus, O.
Raymond Concrete Pipe Co., New York, N. Y.
Reichert Mfg. Co., Milwaukee, Wis.
Sheehan, Thomas, Danville, Va.
Wight & Co., W. N., New York, N. Y.

Concrete Curb Protection. (Steel.)

Steel Protected Concrete Co., Philadelphia, Pa.

Concrete Dams.

Amburn Hydraulic Const. Co., Boston, Mass.

Concrete Floor Dressing. (Waterproof.)

Glidden Varnish Co., Cleveland, O.

Concrete Forms. (Metal.)

Reichert Mfg. Co., Milwaukee, Wis.

Concrete Forms. (Steel Collapsible.)

Concrete Form & Engine Co., Detroit, Mich.

Concrete Mixers.

Carolina Portland Cement Co., Charleston, S. C.
Eureka Machine Co., Lansing, Mich.
Jeffrey Mfg. Co., Columbus, O.
Smith Co., T. L., Chicago, Ill.
Standard Scale & Supply Co., Pittsburg, Pa.

Concrete Reinforcing Bars.

Carnegie Steel Co., Pittsburg, Pa.
Concrete-Steel Co., The, New York, N. Y.
Concrete Steel Engineering Co., New York, N. Y.
Corrugated Bar Co., St. Louis, Mo.
Franklin Steel Co., Franklin, Pa.

Condensers.

Alberger Condenser Co., New York, N. Y.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Westinghouse Machine Co., Pittsburg, Pa.
Paier Condenser & Eng. Co., New York, N. Y.
York Mfg. Co., York, Pa.

Conductor Pipe.

Edwards Mfg. Co., Cincinnati, O.
Hussey & Co., C. G., Pittsburg, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.

Contractors' Machinery and Supplies. [See Hoisting Machinery.]

Allentown Equip. Co., Allentown, Pa.
American Locomotive Co., New York, N. Y.
Austin Mfg. Co., Chicago, Ill.
Case Threshing Mch. Co., J. I., Racine, Wis.
Clay Iron Works, Duluth, Minn.
Contractors' Plant Mfg. Co., Ltd., Buffalo, N. Y.
Exeter Machine Works, Pittsburg, Pa.
Flory Mfg. Co., S., Bangor, Pa.
Eyre Bros. & Co., New York, N. Y.
Ingersoll-Rand Co., New York, N. Y.
Kilbourne & Jacobs Mfg. Co., Columbus, O.
Linton, W. J., New York, N. Y.
Malco Co., The, Cincinnati, O.
Marine Metal & Supply Co., New York, N. Y.
Maryland Equip. & Supply Co., Baltimore, Md.
Mead-Morrison Mfg. Co., Cambridgeport, Mass.
Monaghan Mch. Co., Chicago, Ill.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.
Owen Bucket Co., Cleveland, O.
Fickett, H. W., Philadelphia, Pa.
Robins Conveying Belt Co., New York, N. Y.
Williamson Bros. Co., Philadelphia, Pa.

Conveying Machinery.

Bartlett & Snow Co., C. O., Cleveland, O.
Brown Hoisting Mch. Co., Cleveland, O.
Caldwell & Son Co., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind.
Flory Mfg. Co., S., Bangor, Pa.
Hayward Co., New York, N. Y.
Hunt Co., C. W., West New Brighton, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Lidgerwood Mfg. Co., New York, N. Y.
Link-Belt Co., Nictown (Philadelphia), Pa.
Mead-Morrison Mfg. Co., Cambridgeport, Mass.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Robins Conveying Belt Co., New York, N. Y.
Symons Bros., Milwaukee, Wis.

Cooling Towers.

Alberger Condenser Co., New York, N. Y.
Wheeler Condenser & Eng. Co., New York, N. Y.

Cordage.

American Mfg. Co., New York, N. Y.
Broderick & Bascom Rope Co., St. Louis, Mo.
Columbian Rope Co., Auburn, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Turner Co., J. Spencer, New York, N. Y.
Whitlock Cordage Co., New York, N. Y.

Cordage Machinery.

Haskell-Dawes Machine Co., Boston, Mass.

Corn-Mill Machinery.

Kordyke & Marmon Co., Indianapolis, Ind.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Star Co., B. F., Baltimore, Md.
Wolf Co., Chambersburg, Pa.

Cotton Duck.

Turner Co., J. Spencer, New York, N. Y.

Cotton Oil and Products.

American Cotton Oil Co., New York, N. Y.

Cotton Yarns. (Commission Merchants.)

Paulson, Linkum & Co., New York, N. Y.

Cotton-Gin Machinery.

Carver Cotton Gin Co., East Bridgewater, Mass.
Continental Gin Co., Birmingham, Ala.
Gibbes Machinery Co., Columbia, S. C.
Van Winkle Gin & Machine Co., Atlanta, Ga.

Cotton-Mill Machinery.

American Mach. & Mfg. Co., Charlotte, N. C.
American Supply Co., Providence, R. I.
Draper Co., Hopedale, Mass.
Kitson Machine Shop, Lowell, Mass.
Lowell Machine Shop, Lowell, Mass.
Mason Machine Works, Taunton, Mass.
Saco-Pettee Co., Newton Upper Falls, Mass.
Whitins Machine Works, Whitinsville, Mass.
Whitinsville Spinning Ring Co., Whitinsville, Mass.

Cotton-Mill Supplies.

American Supply Co., Providence, R. I.
Whitinsville Spinning Ring Co., Whitinsville, Mass.

Cottonseed-Oil Machinery.

Ruckeye Iron & Brass Works, Dayton, O.
Burruss Engineering Co., Atlanta, Ga.
Callahan Co., W. F., The Dayton, O.
Cardwell Machine Co., Richmond, Va.
Carver Cotton Gin Co., East Bridgewater, Mass.
Continental Gin Co., Birmingham, Ala.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Van Winkle Gin & Machine Co., Atlanta, Ga.

Couplings.

American Spiral Pipe Works, Chicago, Ill.
Caldwell Co., Inc., W. E., Louisville, Ky.
Dodge Manufacturing Co., Mishawaka, Ind.
Goldens Foundry & Machine Co., Columbus, Ga.
Sinclear-Scott Co., Baltimore, Md.
Wood's Sons, T. B., Chambersburg, Pa.

Couplings. (Car.)

Weimer Chain & Iron Co., Lebanon, Pa.

Couplings. (Hose, Air, Gas, Steam and Water.)

National Tube Co., Pittsburg, Pa.

Covering. (Pipe, Boiler, etc.)

Carolina Portland Cement Co., Charleston, S. C.
Johns-Manville Co., H. W., New York, N. Y.
Southern Pipe Covering Co., Inc., Richmond, Va.

Cranes. (Locomotive.)

Brown Hoisting Machinery Co., Cleveland, O.
Browning Engineering Co., Cleveland, O.
Exeter Machine Works, Pittsburg, Pa.

Cranes. (Travelling, Hand, Power, Hydraulic.)

Brown Hoisting Machinery Co., Cleveland, O.
Hayward Co., New York, N. Y.
Lane Mfg. Co., Montpelier, Vt.
Northern Engineering Works, Detroit, Mich.
Spindel, J. G., Reading, Pa.

Crayons.

Lowell Crayon Co., Lowell, Mass.

Creosote.

Carolina Portland Cement Co., Charleston, S. C.

Creosote Oil.

Atlantic Turpentine Co., Savannah, Ga.

Creosoted Wood Block. (Contractors for Laying.)

Creosoted Wood Block Paving Co., Gulfport, Miss.

Creosoting Works.

Gulfport Creosoting Co., Gulfport, Miss.
Internat'l Creosot'g & Cons. Co., Galveston, Tex.
National Lumber & Creos. Co., Texarkana, Ark.
Southern Creosoting Co., Ltd., Silldell, La.
Southern Wood Preserving Co., Atlanta, Ga.

Crossarms and Pins.

Internat'l Creosot'g & Cons. Co., Galveston, Tex.
Southern Creosoting Co., Ltd., Silldell, La.
Western Electric Co., New York, N. Y.

Crossings. [See Railroad Frogs and Switches.]**Crosstie Machine.**

Standard Cross Tie Mch. Co., New Orleans, La.

Crossties.

Internat'l Creosot'g & Cons. Co., Galveston, Tex.
National Lumber & Creos. Co., Texarkana, Ark.
Naylor & Co., S. E., Gulfport, Miss.
Southern Creosoting Co., Ltd., Silldell, La.

Crossties. (Steel.)

Carnegie Steel Co., Pittsburg, Pa.

Crushers. (Corn and Cob.)

Gardner Crusher Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Williams Pat. Crusher & Pulv. Co., Chicago, Ill.

Crushers. (Rock.)

Austin Mfg. Co., Chicago, Ill.
Case Threshing Mch. Co., J. I., Racine, Wis.
Gardner Crusher Co., New York, N. Y.
Power & Mining Machinery Co., Cudahy, Wis.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Smith Co., T. L., Chicago, Ill.
Symons Bros., Milwaukee, Wis.
Universal Road Mch. Co., Kingston, N. Y.

Crushing and Pulverizing Machinery.

Aising Engineering Co., J. R., New York, N. Y.
Austin Mfg. Co., Chicago, Ill.
Bartlett & Snow Co., C. O., Cleveland, O.
Gardner Crusher Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Power & Mining Machinery Co., Cudahy, Wis.
Pratt Engineering & Mach. Co., Atlanta, Ga.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Symons Bros., Milwaukee, Wis.
Walker & Elliott, Wilmington, Del.
Williams Pat. Crusher & Pulv. Co., Chicago, Ill.

Culverts. (Corrugated Metal.)

American Rolling Mill Co., Middletown, O.
Canton Culvert Co., The, Canton, O.
Dixie Culvert & Metal Co., Atlanta, Ga.
Kentucky Culvert Mfg. Co., Buechel, Ky.
New Orleans Efc. & Metal Wks., New Orleans, La.
North Carolina Metal Cg., Greensboro, N. C.
Roanoke Bridge Co., Roanoke, Va.
Tennessee Metal Culvert Co., Nashville, Tenn.
Virginia Metal Culvert Co., Roanoke, Va.

Culverts. (Vitrified Pipe.)

Stevens Sons Co., H., Macon, Ga.

Cupola Furnaces.

Northern Engineering Works, Detroit, Mich.
Paxson Co., J. W., Philadelphia, Pa.
Petroleum Iron Works Co., Sharon, Pa.

Cuts. (Half-tone, Line, etc.)

Baltimore Maryland Envg. Co., Baltimore, Md.

Cutter Heads. (Woodworking.)

Shimer & Sons, Samuel J., Milton, Pa.

Cutter Grinders.

Abrasive Material Co., Philadelphia, Pa.

Dams. (Reinforced Concrete.)

Amburn Hydraulic Const. Co., Boston, Mass.

Derricks and Derrick Fittings.

American Hoist & Derrick Co., St. Paul, Minn.
Monaghan Machine Co., Chicago, Ill.
National Hoisting Engine Co., Harrison, N. J.

Designers and Illustrators. (Printed Matter.)

Baltimore Maryland Envg. Co., Baltimore, Md.

Die Makers. (Special.)

Black & Decker Mfg. Co., Baltimore, Md.

Disinfectant.

Solar Chemical Co., Washington, D. C.

Ditching Machinery.

American Hoist & Derrick Co., St. Paul, Minn.
American Locomotive Co., New York, N. Y.
American Steel Dredge Co., Ft. Wayne, Ind.
Brownhug Mfg. Co., Mansfield, O.
Fairbanks Steam Shovel Co., Marion, O.
Hayward Co., The, New York, N. Y.
Marion Steam Shovel Co., Marion, O.
Monaghan Machine Co., Chicago, Ill.
Owen Bucket Co., Cleveland, O.
Williams Co., The G. H., Cleveland, O.

Docks. (Concrete.)

Carolina Portland Cement Co., Charleston, S. C.

Raymond Concrete Pipe Co., New York, N. Y.

Doors. (Birch Veneered.)

Massee & Felton Lumber Co., Macon, Ga.

Doors. (Steel Rolling.)

Klinebar Mfg. Co., Columbus, O.

Doors. (Tin Clad.)

Victor Mfg. Co., Newburyport, Mass.

Doors, Partitions. (Metallic.)

Dahlstrom Metallic Door Co., Jamestown, N. Y.

Doors, Sash and Blinds.

Columbus Iron Works Co., Columbus, Ga.

Massee & Felton Lumber Co., Macon, Ga.

Draftsmen's Supplies.

Keuffel & Esser, Hoboken, N. J.

Dredge Chains.

Weimer Chain & Iron Co., Lebanon, Pa.

Dredges. [See Excavating Machinery.]**Drill Presses.** (Sensitive.)

Myers, Chas. S., Columbia, Pa.

Drills. (Pneumatic.) [See also Drills, Rock and Mining.]

Ingersoll-Rand Co., New York, N. Y.

Keystone Steam Well Mach. Co., Beaver Falls, Pa.

McKernan-Terry Drill Co., New York, N. Y.

Drills. (Rock and Mining.)

Chicago Pneumatic Tool Co., Chicago, Ill.

Independent Pneumatic Tool Co., Chicago, Ill.

Ingersoll-Rand Co., New York, N. Y.

Jeffrey Mfg. Co., Columbus, O.

McKernan-Terry Drill Co., New York, N. Y.

Drills. (Twist.)

Manning, Maxwell & Moore, Inc., New York, N. Y.

Morse Twist Drill & Mch. Co., New Bedford, Mass.

Drive Well Points and Well Supplies.

National Tube Co., Pittsburg, Pa.

Drop Forgings.

American Spiral Pipe Works, Chicago, Ill.

Great Southern Automobile Co., Birmingham, Ala.

Richmond Forgings Corporation, Richmond, Va.

Drop Forging Machinery.

Bliss Co., E. W., Brooklyn, N. Y.

Drying Machinery.

American Blower Co., Detroit, Mich.

American Process Co., New York, N. Y.

Bailey-Leiby Co., The, Charleston, S. C.

Buffalo Forge Co., Buffalo, N. Y.

General Electric Co., Schenectady, N. Y.

Sturtevant Co., B. F., Hyde Park, Mass.

Drykilns.

Buffalo Forge Co., Buffalo, N. Y.

Hollister-Whitney Co., Quincy, Ill.

Sturtevant Co., B. F., Hyde Park, Mass.

Union Iron Works Co., Selma, Ala.

Dumbwaiters.

Sidney Elevator & Mfg. Co., Sidney, O.

Spindel, J. G., Reading, Pa.

Dump Wagons and Wagon Boxes.

Case Threshing Mch. Co., J. I., Racine, Wis.

Single Wagon Wks., Auburn, N. Y.

Troy Wagon Works Co., Troy, O.

Dust-Collecting Systems.

Buffalo Forge Co., Buffalo, N. Y.

Savannah Blow Pipe Co., Savannah, Ga.

Slinger Bros., St. Louis, Mo.

Smith Roofing Co., Wilmington, N. C.

Standard Blower & Metal Mfg. Co., Atlanta, Ga.

Dynamite.

du Pont de Nemours Powder Co., E. I., Wilmington, Del.

Dynamos and Motors. (Steam Turbine.)

De Laval Steam Turbine Co., Trenton, N. J.

Emerson Steam Pump Co., Alexandria, Va.

Ford Wayne Electric Works, Ft. Wayne, Ind.

General Electric Co., Schenectady, N. Y.

Southwick Fdry. & Mch. Co., Philadelphia, Pa.

Terry Steam Turbine Co., New York, N. Y.

Wagner Electric Mfg. Co., St. Louis, Mo.

Western Electric Co., New York, N. Y.

Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

Eaves. (Trough.)

Hudway Mfg. Co., Cincinnati, O.

Edwards & Co., C. G., Pittsburg, Pa.

Milwaukee Corrugating Co., Milwaukee, Wis.

Electors. (Automatic Sewage.)

Blaisdell Machinery Co., Bradford, Pa.

Electric Machinery. (Dynamos, Generators, Motors, etc.)

Allis-Chalmers Co., Milwaukee, Wis.

American Engine Co., Bound Brook, N. J.

American Machine Co., Louisville, Ky.

Crocker-Wheeler Co., Amper, N. J.

Doubladay-Hill Electric Co., Pittsburg, Pa.

Englberg's Elec. & Mech. Works, St. Joseph, Mo.

Fort Wayne Electric Works, Ft. Wayne, Ind.

General Electric Co., Schenectady, N. Y.

Gregory Electric Co., Chicago, Ill.

Johns-Manville Co., H. W., New York, N. Y.
Kentucky Electrical Co., Owensboro, Ky.
Lee Electric Co., Baltimore, Md.
Levy, Beronda, Columbus, Ga.
Piedmont Electric Co., Asheville, N. C.
Robbins & Myers Co., Springfield, O.
Wagner Electric Mfg. Co., St. Louis, Mo.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

CLASSIFIED INDEX OF ARTICLES ADVERTISED.

- Engines.**
GAS AND GASOLINE.
 Blaisdell Machinery Co., Bradford, Pa.
 Bogart Gas Power Eng. Co., Buffalo, N. Y.
 De La Vergne Machine Co., New York, N. Y.
 Fairbanks, Morse & Co., Chicago, Ill.
 Foss Gas Engine Co., Springfield, O.
 Gibbs Gas Engine Co., Atlanta, Ga.
 Mletz, A., New York, N. Y.
 Westinghouse Machine Co., The, Pittsburg, Pa.
OIL.
 Covington Mach. Co., New York, N. Y.
 De La Vergne Machine Co., New York, N. Y.
 Mletz, A., New York, N. Y.
Engines. (Steam.)
 Allis-Chalmers Co., Milwaukee, Wis.
 American Hower Co., Detroit, Mich.
 American Engine Co., Round Brook, N. J.
 American Hoist & Derrick Co., St. Paul, Minn.
 Ames Iron Works, Oswego, N. Y.
 Atlas Engine Works, Indianapolis, Ind.
 Ball Engine Co., Erie, Pa.
 Brownell Co., The, Dayton, O.
 Buffalo Forge Co., Buffalo, N. Y.
 Cameron & Barkley Co., Charleston, S. C.
 Chicago House Wrecking Co., Chicago, Ill.
 Cooper Co., C. & G., Mt. Vernon, O.
 Duke Engine Co., Grand Haven, Mich.
 Engberg's Elect. & Mech. Works, St. Joseph, Mo.
 Gibbs Machinery Co., Columbia, S. C.
 Greenwald Co., I. & E., Cincinnati, O.
 Griffith & Wedge Co., The, Zanesville, O.
 Harrisburg Fdry. & Mach. Wks., Harrisburg, Pa.
 Hoover, Owen, Reutcher Co., Hamilton, O.
 Houston, Stanwood & Gamble Co., Cincinnati, O.
 Leffel & Co., James, Springfield, O.
 Lombard Iron Works, Augusta, Ga.
 Mecklenburg Iron Works, Charlotte, N. C.
 Morris Machine Works, Baldwinville, N. Y.
 Murray Iron Works Co., Burlington, Ia.
 Phoenix Iron Works Co., Meadville, Pa.
 Price Machinery Co., S. M., Norfolk, Va.
 Purser, J. H., Charlotte, N. C.
 Ridgway Dynamo & Engine Co., Ridgway, Pa.
 Schofield's Sons Co., J. S., Macon, Ga.
 Smith-Courtney Co., Richmond, Va.
 Southern Engine & Boiler Works, Jackson, Tenn.
 Sturtevant Co., B. F., Hyde Park, Mass.
 Union Iron Works Co., Selma, Ala.
 Vilter Mfg. Co., Milwaukee, Wis.
 Westinghouse Machine Co., Pittsburg, Pa.
Engines. (Truck and Aeroplane.)
 Black & Decker Mfg. Co., Baltimore, Md.
Envelopes.
 Young & Selden Co., Baltimore, Md.
Excavating Machinery. (Steam Shovels, etc.)
 American Hoist & Derrick Co., St. Paul, Minn.
 American Locomotive Co., New York, N. Y.
 American Steel Dredge Co., Ft. Wayne, Ind.
 Baldwin Equipment & Supply Co., Chicago, Ill.
 Browning Mfg. Co., Mansfield, O.
 Bucyrus Co., The, St. Milwaukee, Wis.
 Fairbanks Steam Shovel Co., Marion, O.
 Hayward Co., New York, N. Y.
 Jeffrey Mfg. Co., Columbus, O.
 Lidgerwood Mfg. Co., New York, N. Y.
 Males Co., Cincinnati, O.
 Marion Steam Shovel Co., Marion, O.
 Monaghan Machine Co., Chicago, Ill.
 Owen Bucket Co., Cleveland, O.
 Williams Co., The G. H., Cleveland, O.
Excelsior Machinery.
 Kline, Lewis T., Alpena, Mich.
Exhaust Heads.
 Aberneth & Root Mfg. Co., Newburgh, N. Y.
 American Spiral Pipe Works, Chicago, Ill.
 Greenwald Co., I. & E., Cincinnati, O.
 Hoppes Mfg. Co., Springfield, O.
Exhibits. (Machinery Builders' Equipment and Supplies.)
 Bourse, The, Philadelphia, Pa.
 Builders' Exchange, Baltimore, Md.
Expansion Joints.
 Alberger Condenser Co., New York, N. Y.
 Badger & Sons Co., E. B., Boston, Mass.
Explosives.
 du Pont de Nemours Powder Co., E. I., Wilmington, Del.
Factory Sites. (Town and Railroad.) [See Industrial, Agricultural and Commercial Opportunities.]
Fans. (Electric.)
 Doubleday-Hill Electric Co., Pittsburg, Pa.
 General Electric Co., Schenectady, N. Y.
 Robbins & Myers Co., Springfield, O.
 Western Electric Co., New York, N. Y.
 Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.
Fans. (Ventilating.) [See Blowers, Exhaust Fans.]
Fastener Driving Machine. (Corrugated Joint.)
 Saranac Machine Co., St. Joseph, Mich.
Feed-Water Heaters and Purifiers.
 Alberger Condenser Co., New York, N. Y.
 American Water Softener Co., Philadelphia, Pa.
 Blake & Knowles Steam Pump Works, New York, N. Y.
 Brownell Co., Dayton, O.
 Exeter Machine Works, Pittston, Pa.
 Gibbs Machinery Co., Columbia, S. C.
 Greenwald Co., I. & E., Cincinnati, O.
 Hoppes Mfg. Co., Springfield, O.
 Macdon, Thomas, Philadelphia, Pa.
 Murray Iron Works Co., Burlington, Ia.
 National Pipe Rending Co., New Haven, Conn.
 Sealife & Sons Co., Wm. B., Pittsburg, Pa.
 Stewart Heater Co., Buffalo, N. Y.
 Wheeler Condenser & Eng. Co., New York, N. Y.
Feed-Water Heater and Purifier and Oil Separator Combined.
 Blake & Knowles Steam Pump Works, New York, N. Y.
 Stewart Heater Co., Buffalo, N. Y.
Felt. (Building, Sheathing.)
 Barrett Mfg. Co., Philadelphia, Pa.
Fencing, Entrance Gates. (Iron, Steel, Wire.)
 American Steel & Wire Co., Chicago, Ill.
 Bolles Iron & Wire Works, J. E., Detroit, Mich.
 Dow Wire Works, Louisville, Ky.
 Duffur & Co., Baltimore, Md.
 New Jersey Wire Cloth Co., Trenton, N. J.
 Ohio Elevator & Mach. Co., The, Columbus, O.
Fertilizer Machy. [See also Phosphate Machy.]
 Campbell, P. F., Philadelphia, Pa.
 Walk & Mordock Iron Works, Charleston, S. C.
 Walker & Elliott, Wilmington, Del.
 Wilmington Iron Works, Wilmington, N. C.
Files.
 Barnett Co., G. & H., Philadelphia, Pa.
 Delta File Works, Philadelphia, Pa.
 Nicholson File Co., Providence, R. I.
Filters. (Water, for Domestic and Industrial Purposes.)
 American Water Softener Co., Philadelphia, Pa.
 International Filter Co., Chicago, Ill.
 Lynn Superior Co., The, Cincinnati, O.
 New York Con. Jewell Fil. Co., New York, N. Y.
 Roberts Filter Mfg. Co., Philadelphia, Pa.
 Sealife & Sons Co., Wm. B., Pittsburg, Pa.
 Tucker & Laxton, Charlotte, N. C.
Fire Clay Brick. [See Brick, Fire Clay.]
Fire Box Blocks.
 Ashland Fire Brick Co., Ashland, Ky.
Fire Door Fixtures.
 Peters & Son, Jas., Philadelphia, Pa.
 Victor Mfg. Co., Newburyport, Mass.
Fire Extinguishers.
 Badger & Sons Co., E. B., Boston, Mass.
 General Fire Extinguisher Co., Providence, R. I.
Fire Escapes.
 Bolles Iron & Wire Works, J. E., Detroit, Mich.
 Chesapeake Iron Works, Baltimore, Md.
 Raquette Foundry & Supply Co., Massena, N. Y.
 Roanoke Iron Works, Inc., Roanoke, Va.
Fire Insurance.
 Hartford Fire Insurance Co., Hartford, Conn.
Fireproof Building Construction. (Steel.)
 [See Concrete Construction.]
Fireproof Building Material.
 Clinton Wire Cloth Co., Clinton, Mass.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 Johns-Manville Co., H. W., New York, N. Y.
Fireproof Doors and Shutters.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 Klinger Mfg. Co., Columbus, O.
 New Orleans Roof & Metal Co., New Orleans, La.
 Richmond Safety Gate Co., Richmond, Ind.
 Victor Mfg. Co., Newburyport, Mass.
Fireproof Windows. [See Window Frames and Sashes (Fireproof).]
Fire Protection Hardware.
 Peters & Son, Jas., Philadelphia, Pa.
Flanges. (Iron and Steel.)
 American Cast Iron Pipe Co., Birmingham, Ala.
 American Pipe & Construction Co., Phila., Pa.
 American Spiral Pipe Works, Chicago, Ill.
 Cameron Steam Pump Wks., A. S., New York, N. Y.
 Dart Manufacturing Co., E. M., Providence, R. I.
 General Fire Extinguisher Co., Providence, R. I.
 Giambruno Pipe & Foundry Co., Lynchburg, Va.
 National Tube Co., Pittsburg, Pa.
 U. S. Cast Iron Pipe & Fdy. Co., New York, N. Y.
 Whitlock Coll. Pipe Co., Hartford, Conn.
 Wood & Co., R. D., Philadelphia, Pa.
Flexible Joints.
 Moran Flex. Steam Joint Co., Inc., Louisville, Ky.
Flooring. (Cement.)
 Dagostin & Angelini Bros., Montgomery, Ala.
Flooring. (Hardwood, Maple, Oak.)
 Carolina Portland Cement Co., Charleston, S. C.
 Northern States Mfg. Co., W. J., Memphis, Tenn.
 Nashville Hardwood Flooring Co., Nashville, Tenn.
Flour and Grist Mill Machinery and Supplies.
 Caldwell & Sons Co., H. W., Chicago, Ill.
 Gibbs Machinery Co., Columbia, S. C.
 Nordyke & Marmion Co., Indianapolis, Ind.
 Salem Foundry & Machine Works, Salem, Va.
 Starr Co., B. F., Baltimore, Md.
 Veach & Co., L. R., Louisville, Ky.
 Wolf Co., Chambersburg, Pa.
Flushtank Regulator.
 Modern Iron Works, Quincy, Ill.
Flushtanks.
 Merritt & Co., Camden, N. J.
Foot Valves.
 Cameron Steam Pump Wks., A. S., New York, N. Y.
Forges.
 Buffalo Forge Co., Buffalo, N. Y.
 Sturtevant Co., B. F., Hyde Park, Mass.
Forgings.
 Richmond Forgings Corporation, Richmond, Va.
 Weiner Chain & Iron Co., Lebanon, Pa.
Forms. (Steel Collapsible.)
 Concrete Form & Engine Co., Detroit, Mich.
Foundations.
 Raymond Concrete Pile Co., New York, N. Y.
Foundations. (Open or Pneumatic.)
 Missouri Val. Bridge & Iron Co., Leavenworth, Kan.
Foundry Equipment and Supplies.
 Paxson Co., J. W., Philadelphia, Pa.
Frogs. [See Railroad Frogs and Switches.]
Fuel Economizers.
 Green Fuel Economizer Co., Mattewan, N. Y.
 Sturtevant Co., B. F., Hyde Park, Mass.
Fuel Oil.
 Gulf Refining Co., Pittsburg, Pa.
 Indian Refining Co., Cincinnati, O.
 Texas Co., The, New York, N. Y.
Fuel Oil Equipment.
 Ingram Fuel Oil Burner Co., Newport News, Va.
 Petroleum Iron Works Co., Sharon, Pa.
Furnace Builders.
 Ritter-Conley Mfg. Co., Pittsburg, Pa.
Fuses, Bases and Fittings.
 Johns-Manville Co., H. W., New York, N. Y.
Galvanized Steel and Iron.
 American Sheet & Tin Plate Co., Pittsburg, Pa.
 J. C. H. Galvanizing Co., Philadelphia, Pa.
 La Belle Iron Works, Steubenville, O.
 McCalla, Harold, Philadelphia, Pa.
 New Orleans Roof & Metal Co., New Orleans, La.
 Wood Iron & Steel Co., Alan, Philadelphia, Pa.
 Youngstown Sheet & Tube Co., Youngstown, O.
Gas Blowers. (Turbine.)
 Terry Steam Turbine Co., New York, N. Y.
Gas Compressors.
 Blaisdell Machinery Co., Bradford, Pa.
 Ingersoll-Rand Co., New York, N. Y.
Gas Holders.
 Bartlett-Hayward Co., The, Baltimore, Md.
 Chicago Bridge & Iron Wks., Chicago, Ill.
Gas Machines.
 Economy Gas Mach. Co., Rochester, N. Y.
Gas Plants.
 Western Gas Construction Co., Ft. Wayne, Ind.
Gas Plants and Benches.
 Improved Equipment Co., New York, N. Y.
Gas Plants. (Coal and Water.)
 Bartlett-Hayward Co., The, Baltimore, Md.
Gas Producers.
 Bogart Gas Power Eng. Co., Buffalo, N. Y.
 De La Vergne Machine Co., New York, N. Y.
 Foss Gas Engine Co., The, Springfield, O.
 Gibbs Gas Engine Co., Atlanta, Ga.
 Improved Equipment Co., New York, N. Y.
 Westinghouse Machine Co., Pittsburg, Pa.
 Wood & Co., R. D., Philadelphia, Pa.
Gasoline and Kerosene.
 Gulf Refining Co., Pittsburg, Pa.
 Indian Refining Co., Cincinnati, O.
 Texas Co., The, New York, N. Y.
Gas and Steam Fitters' Tools.
 Saunders' Sons, D., Yonkers, N. Y.
Gaskets. (Rubber.)
 N. J. Car Spring & Rubber Co., Jersey City, N. J.
Gears.
 Caldwell Co., Inc., W. E., Louisville, Ky.
 Caldwell & Son Co., H. W., Chicago, Ill.
 Dodge Manufacturing Co., Mishawaka, Ind.
 Earle Gear & Machine Co., The, Birmingham, Pa.
 Great Southern Automobile Co., Birmingham, Ala.
 Jeffrey Mfg. Co., Columbus, O.
 Poole Engineering & Machine Co., Baltimore, Md.
 Positive Clutch & Pulley Works, Buffalo, N. Y.
 Trump Mfg. Co., Springfield, O.
Geologists.
 Clapp, Frederick C., Pittsburg, Pa.
 Froehling & Robertson, Richmond, Va.
Glass. (Plate, etc.)
 Binswanger & Co., Memphis, Tenn.
Governors.
 Pickering Governor Co., Portland, Conn.
Grain Elevator Supplies.
 Caldwell & Sons Co., H. W., Chicago, Ill.
 Dodge Manufacturing Co., Mishawaka, Ind.
 Jeffrey Mfg. Co., Columbus, O.
 Link-Belt Co., Nicetown (Philadelphia), Pa.
Granite.
 Harris Granite Quarries Co., Salisbury, N. C.
Graphite.
 Detroit Graphite Co., Detroit, Mich.
 Dixon Crucible Co., Joseph, Jersey City, N. J.
Grates and Grate Bars.
 Patch & Son Co., S. B., Streator, Ill.
 Thomas Grate Bar Co., Birmingham, Ala.
Gravel.
 Arundel Sand & Gravel Co., Baltimore, Md.
 Cassels Cement Gravel Co., Augusta, Ga.
 Southern Sand & Gravel Co., Richmond, Va.
Greases and Lubricating Compounds.
 Cook's Sons, Adam, New York, N. Y.
 Galena Signal Oil Co., Frank, Pa.
 Indian Refining Co., Cincinnati, O.
 Robinson & Son Co., Wm. C., Baltimore, Md.
 Texas Co., The, New York, N. Y.
Grease and Oil Cups and Lubricators.
 Cook's Sons, Adam, New York, N. Y.
Grinders. (Gypsum, Limestone, etc.)
 Gardner Crusher Co., New York, N. Y.
 Williams Pat. Crusher & Pulv. Co., Chicago, Ill.
Grinding Wheels.
 Abrasive Material Co., Philadelphia, Pa.
 Carborundum Co., Niagara Falls, N. Y.
 Norton Co., Worcester, Mass.
 Vitrifed Wheel Co., Westfield, Mass.
Groovers.
 Huther Bros. Saw Mfg. Co., Rochester, N. Y.
Gunpowder.
 du Pont de Nemours Powder Co., E. I., Wilmington, Del.
Hammers. (Steam, Power, Pneumatic.)
 Chicago Pneumatic Tool Co., Chicago, Ill.
 Independent Pneumatic Tool Co., Chicago, Ill.
 Ingersoll-Rand Co., New York, N. Y.
Hand Elevators.
 Sidney Elevator Mfg. Co., Sidney, O.
Handle Machinery. [See Woodworking Machy.]
Hangers. [See Pulleys, Shafting and Hangers.]
Hauling Engines. (Steam Traction.)
 Case Threshing Mach. Co., J. I., Racine, Wis.
Hay Tools.
 Myers & Bro., F. E., Ashland, O.
Heater. (Portable, for Bituminous Pavements.)
 Ruggles-Coles Engineering Co., New York, N. Y.
Heating Apparatus, Engineers and Contractors.
 Bartlett-Hayward Co., Baltimore, Md.
 Buffalo Forge Co., Buffalo, N. Y.
 Monitor Steam Generator Mfg. Co., Balto., Md.
 Peck-Hammond Co., The, Cincinnati, O.
Hoisting Machinery.
 American Hoist & Derrick Co., St. Paul, Minn.
 Brown Hoisting Machy. Co., Cleveland, O.
 Byers Machine Co., John F., Ravenna, O.
 Clyde Iron Works, Duluth, Minn.
 Contractors' Plant Mfg. Co., Ltd., Buffalo, N. Y.
 Duke Engine Co., Grand Haven, Mich.
 Exeter Machine Works, Pittston, Pa.
 Flory Mfg. Co., S. Bangor, Pa.
 Foss Gas Engine Co., The, Springfield, O.
 Hayward Co., New York, N. Y.
 Link-Belt Co., Nicetown (Philadelphia), Pa.
 Lidgerwood Mfg. Co., New York, N. Y.
 Males Co., Cincinnati, O.
 Mead-Morrison Mfg. Co., Cambridgeport, Mass.
 Monaghan Machine Co., Chicago, Ill.
 National Hoisting Engine Co., Harrison, N. J.
 Stroudsburg Engine Works, Stroudsburg, Pa.
 Williamson Bros. Co., Philadelphia, Pa.
Hoists.
CHAIN.
 Ford Chain Block & Mfg. Co., Philadelphia, Pa.
 Speidel, J. G., Reading, Pa.
ELECTRIC.
 American Hoist & Derrick Co., St. Paul, Minn.
 Lidgerwood Mfg. Co., New York, N. Y.
 Monaghan Mch. Co., Chicago, Ill.
 Northern Engineering Works, Detroit, Mich.
 Patten Mfg. Co., Chattanooga, Tenn.
PNEUMATIC MOTORS.
 Chicago Pneumatic Tool Co., Chicago, Ill.
 Ingersoll-Rand Co., New York, N. Y.
Hoops, Bands, etc. (Galvanized.)
 J. C. H. Galvanizing Co., Philadelphia, Pa.
 McCalla, Harold, Philadelphia, Pa.
Hoops. (Barrel.)
 American Steel & Wire Co., Chicago, Ill.
 Carnegie Steel Co., Pittsburg, Pa.
Hose.
 Eureka Fire Hose Mfg. Co., New York, N. Y.
 N. J. Car Spring & Rubber Co., Jersey City, N. J.
Hotels.
 Hotel Essex, Boston, Mass.
Hot Water Service Heaters.
 Alberger Condenser Co., New York, N. Y.
Hydrants.
 Bourbon Copper & Brass Wks. Co., Cincinnati, O.
 Columbian Iron Works, Chattanooga, Tenn.
 Giambruno Pipe & Foundry Co., Lynchburg, Va.
 Goulds Mfg. Co., Seneca Falls, N. Y.
 Myers & Bro., F. E., Ashland, O.
 Wood & Co., R. D., Philadelphia, Pa.
Hydraulic Giants.
 American Spiral Pipe Works, Chicago, Ill.
Hydraulic Rams.
 Goulds Mfg. Co., Seneca Falls, N. Y.
 Rife Engine Co., New York, N. Y.
Ice-making Machinery and Supplies.
 Columbus Iron Works Co., Columbus, Ga.
 Creamery Package Mfg. Co., Chicago, Ill.
 De La Vergne Machine Co., New York, N. Y.
 Frick Co., The, Waynesboro, Pa.
 International Filter Co., Chicago, Ill.
 Remington Machine Co., Wilmington, Del.
 Trilt-Nordmeyer Eng. Co., St. Louis, Mo.
 Vilter Mfg. Co., Milwaukee, Wis.
 Vogt Machine Co., Henry, Louisville, Ky.
 Wolf Mfg. Co., The Fred W., Chicago, Ill.
 York Mfg. Co., York, Pa.
Incorporators. (Companies.)
 Delaware Trust Co., Wilmington, Del.
Industrial, Agricultural and Commercial Opportunities.
CITIES AND TOWNS.
 Atlanta, Ga., Ga. Bureau of Indus'y & Imm'gr.
 Baltimore, Md., Ga. & Electric Co.
 Baltimore, Md., Cloud & Clark.
 Balto. (Grand Prairie P. O.), Tex., Dalworth Co.
 Fayetteville, N. C., Chamber of Commerce.
 Huntington, W. Va., Huntington Chamber of Commerce.
 Houston, Tex., A. D. Alderson Co.
 Morgan City, La., Willard Ditch.
 Newport News, Va., Old Dominion Land Co.
 Texas City, Tex., Texas City Transportation Co.
RAILROADS.
 Atlanta, Birm'gh'm & Atlantic R. R., Atlanta, Ga.
 Atlanta & West Point R. R. Co., Montgomery, Ala.
 Baltimore & Ohio Railroad, Baltimore, Md.
 Carolina, Clinchfield & O. Ry., Johnson City, Tenn.
 Central of Georgia Ry. Co., Savannah, Ga.
 Frisco Lines, St. Louis, Mo.
 Illinois Central Railroad Co., Chicago, Ill.
 Norfolk & Western Railway, Roanoke, Va.
 Seaboard Air Line, Portsmouth, Va.
 Southern Railway Co., Washington, D. C.
Industrial Track Work. [See Railways, Ind.]
Injectors.
 Jenkins Bros., New York, N. Y.
 Sellers & Co., Inc., Wm., Philadelphia, Pa.
Insulating Materials.
 Johns-Manville Co., H. W., New York, N. Y.
 Southern Pipe Covering Co., Inc., Richmond, Va.
Insurance.
 Hartford Fire Insurance Co., Hartford, Conn.
 Maryland Casualty Co., Baltimore, Md.
Interior Trim. (Metallic.)
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
Interstate Commerce Practice.
 Van Sant, Frank, Washington, D. C.
Iron.
 Alabama Con. Coal & Iron Co., Birmingham, Ala.
 American Rolling Mill Co., Middletown, O.
 La Belle Iron Works, Steubenville, O.
 Lebanon Valley Iron & Steel Co., Lebanon, Pa.
 Milton Mfg. Co., Milton, Pa.
 Republic Iron & Steel Co., Youngstown, O.
 Tennessee Coal, Iron & R. R. Co., Birm'gh'm, Ala.
 Wood Iron & Steel Co., Alan, Philadelphia, Pa.
Irrigation Machinery.
 Blakeslee Mfg. Co., Du Quoin, Ill.
 Cameron Steam Pump Wks., A. S., New York, N. Y.
Kettles. (Steam Jacket.)
 Badger & Sons Co., E. B., Boston, Mass.
 Petroleum Iron Works Co., Sharon, Pa.
Key Seater. (Portable.)
 Burr & Son, John T., Brooklyn, N. Y.
Knitting Machinery.
 Acme Knitting Machine & Needle Co., Franklin Falls, N. H.
Lacquers. (All Purposes.)
 Durlake Mfg. Co., St. Louis, Mo.
Lamp Posts. (Electric, Gas.)
 Western Gas Construction Co., Ft. Wayne, Ind.
Lamps. (Arc and Incandescent.)
 Boston Incandescent Lamp Co., Danvers, Mass.
 Columbia Incandescent Lamp Co., St. Louis, Mo.
 Doubleday-Hill Electric Co., Pittsburg, Pa.
 Fostoria Incandescent Lamp Co., Fostoria, O.
 General Electric Co., Schenectady, N. Y.
 Kentucky Electrical Co., Owensboro, Ky.
 Lee Electric Co., Baltimore, Md.
 Piedmont Electric Co., Asheville, N. C.
 Western Electric Co., New York, N. Y.
 Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

- Lands.**
Beller & Wilson, Roanoke, Va.
Cloud & Clark, Baltimore, Md.
Dewitt & Meredith, Knoxville, Tenn.
Fendley & Co., Albert, Brunswick, Ga.
Hutchinson, H. B., Washington, D. C.
Klabrough & Co., J. T., Atlanta, Ga.
Morris & Co., Abbott, Norfolk, Va.
Nashum & Co., S. L., Norfolk, Va.
Robertson, W. W., Norfolk, Va.
- Laths. (Expanded Metal.)**
Carolina Portland Cement Co., Charleston, S. C.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Lathes. (Engine.)**
Greaves, Klusman & Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Miami Valley Mch. Tool Co., Dayton, O.
- Lawn Furniture.**
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Dufur & Co., Baltimore, Md.
Dufur, Baggett & Co., Baltimore, Md.
- Leadite.**
Leadite Co., The, Philadelphia, Pa.
- Lime.**
Carolina Portland Cement Co., Charleston, S. C.
Security Cement & Lime Co., Baltimore, Md.
Southern Lime & Cement Co., Charleston, S. C.
Tidewater Portland Cement Co., Baltimore, Md.
- Lime. (Hydrated.)**
Security Cement & Lime Co., Baltimore, Md.
Tidewater Portland Cement Co., Baltimore, Md.
- Lime Kilns and Equipment.**
Improved Equipment Co., New York, N. Y.
- Limestone Products.**
Security Cement & Lime Co., Baltimore, Md.
- Liquor Filters.**
International Filter Co., Chicago, Ill.
- Lithographers, Engravers.**
Young & Selden Co., Baltimore, Md.
- Lockers. (Metal.)**
Kellogg Metal Ceiling Mfg. Co., S., Pittsburg, Pa.
- Locomotives.**
INDUSTRIAL.
American Locomotive Co., New York, N. Y.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Boren, Joseph E., Norfolk, Va.
Byers Machine Co., John F., Ravens, O.
Climax Mfg. Co., Corry, Pa.
Davenport Locomotive Works, Davenport, Ia.
Jeffrey Mfg. Co., Columbus, O.
Lima Locomotive & Machine Co., Lima, O.
Males Co., Cincinnati, O.
Porter Co., H. K., Pittsburg, Pa.
Vulcan Iron Works, Wilkes-Barre, Pa.
- RAILWAY.**
American Locomotive Co., New York, N. Y.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Lima Locomotive & Machine Co., Lima, O.
Males Co., Cincinnati, O.
Southern Supply Co., Norfolk, Va.
- Looms and Weaving Machinery.**
Draper & Co., Hopedale, Mass.
Mason Machine Works, Taunton, Mass.
- Lumber.**
Industrial Lumber Co., Elizabeth, La.
Massee & Felton Lumber Co., Macon, Ga.
- Lumber. (Heavy Construction, Pitch Pine, etc.)**
Massee & Felton Lumber Co., Macon, Ga.
National Lumber & Creamery Co., Texarkana, Ark.
Naylor & Co., S. E., Gulfport, Miss.
- Lumber. (Yellow Pine.)**
Industrial Lumber Co., Elizabeth, La.
- Lumber Buggies.**
Sole Steam Feed Works, Meridian, Miss.
- Lumber Stackers.**
Sole Steam Feed Works, Meridian, Miss.
- Machinery. (Special.)**
Black & Decker Mfg. Co., Baltimore, Md.
Bliss Co., E. W., Brooklyn, N. Y.
Great Southern Automobile Co., Birmingham, Ala.
Kline, Lewis T., Alpena, Mich.
Ledger & Co., Charles, Brooklyn, N. Y.
Myers, Charles, Columbia, Pa.
Raymond Bros., Impact Pulp Co., Chicago, Ill.
Rogersford Fdry. & Mch. Wks., Rogersford, Pa.
Stratton & Bragg Co., Petersburg, Va.
Universal Telegraphic Co., Baltimore, Md.
- Machinery and Supplies. (New and Second-Hand Bargains.)**
Allentown Equip. Co., Allentown, Pa.
Bain, Iron, Steel & Metal Co., Baltimore, Md.
Bain, Metal Mchry. & Supply Co., Baltimore, Md.
Boston Iron & Metal Co., Baltimore, Md.
Campbell, Thos. J., Philadelphia, Pa.
Chicago House Wrecking Co., Chicago, Ill.
Cleveland Belling & Machinery Co., Cleveland, O.
Dorner Railway Equipment Co., Chicago, Ill.
Frank & Son, Ernest T., Baltimore, Md.
Hinter's Sons Co., Henry A., Philadelphia, Pa.
Holling Mch. Co., New York, N. Y.
Hutton, H. C., Memphis, Tenn.
Huntington Mchry. & Sup. Co., Wilkes-Barre, Pa.
Hyde Bros. & Co., New York, N. Y.
Lehman, Charles E., Birmingham, Ala.
Levene & Co., E., Philadelphia, Pa.
Linton, W. J., New York, N. Y.
Lodge & Shipley Machine Tool Co., Cincinnati, O.
Marine Metal & Supply Co., New York, N. Y.
Morton, Richard, Baltimore, Md.
Papworth, H. M., New York, N. Y.
Pfeiffer Engineering Co., Chicago, Ill.
Pickett, H. W., Philadelphia, Pa.
Pittsburg Mchry. & Equip. Co., Pittsburg, Pa.
Preston Tool & Supply Co., New York, N. Y.
Randle Machinery Co., Cincinnati, O.
Read Co., Howard W., Philadelphia, Pa.
Samuel, Frank, Philadelphia, Pa.
Seibert's Sons, Inc., L. F., Philadelphia, Pa.
Southern Supply Co., Norfolk, Va.
Stewart Co., Paul, Cincinnati, O.
Tampa Machinery Exchange, Tampa, Fla.
Texas Supply Co., Beaumont, Tex.
Thompson, Jr., Co., Jos. H., New York, N. Y.
Towner, Frank, Philadelphia, Pa.
Wicks Bros., New York, N. Y.
Yearley, Thomas, Philadelphia, Pa.
- Machine Tools.**
Greaves, Klusman & Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Miami Valley Mch. Tool Co., Dayton, O.
- Machinists. (Engineers.)**
American Mch. & Mfg. Co., Charlotte, N. C.
Roanoke Iron Works, Inc., Roanoke, Va.
Stratton & Bragg Co., Petersburg, Va.
- Magnesia Materials.**
Johns-Manville Co., H. W., New York, N. Y.
- Magnesite. (Dead Burned.)**
Harbison-Walker Refractories Co., Pittsburg, Pa.
- Magnets. (Electric Lift.)**
Browning Engineering Co., Cleveland, O.
- Magnet Electro. (For Cottonseed, Linters and Hullers.)**
Dixie Electro Magnet Co., Memphis, Tenn.
- Magnetic Separators.**
Faxson Co., J. W., Philadelphia, Pa.
- Mail Chutes.**
Cutler Mail Chute Co., Rochester, N. Y.
- Mantels. (Wooden.)**
Northcross Mantel Co., W. J., Memphis, Tenn.
- Marble Work. (Interior.)**
Dagostin & Angelini Bros., Montgomery, Ala.
Southern Mosaic Tile Co., Birmingham, Ala.
- Mechanical Draft.**
American Blower Co., Detroit, Mich.
Buffalo Steam Pump Co., Buffalo, N. Y.
Garden City Fan Co., Chicago, Ill.
Sturtevant Co., B. F., Hyde Park, Mass.
- Metal Ceilings. (See Ceilings, Metal.)**
- Metaline.**
North Amer. Metaline Co., Long Island City, N. Y.
- Metal Culverts. (See Culverts.) (Corrugated Metal.)**
- Metal Polish.**
Hoffman, Geo. W., Indianapolis, Ind.
- Metal Shingles.**
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Corright Metal Roofing Co., Philadelphia, Pa.
Edwards Manufacturing Co., Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
- Metal Window Frames and Sashes.**
Edwards Mfg. Co., The, Cincinnati, O.
Reichler Metal Ceil. & Mfg. Co., S., Pittsburg, Pa.
Voigtmann & Co., Chicago, Ill.
- Metal Work. (Stamped and Embossed Hotel Checks, Key Tags, etc.)**
American Railway Supply Co., New York, N. Y.
- Metal-Working Machinery.**
Bertsch & Co., Cambridge City, Ind.
Bliss Co., E. W., Brooklyn, N. Y.
Gibbs Machinery Co., Columbia, S. C.
Ledger & Co., Charles, Brooklyn, N. Y.
Price Machinery Co., S. M., Norfolk, Va.
Rogersford Fdry. & Mch. Co., Rogersford, Pa.
- Micrometers, Calipers, Etc.**
Starrett Co., L. S., Athol, Mass.
- Milk Filters. (Liquor, Milk, etc.)**
International Filter Co., Chicago, Ill.
- Mill Engineers and Architects.**
Lockwood, Greene & Co., Boston, Mass.
Silline, J. E., Greenville, S. C.
Sohle, Edward, Charlotte, N. C.
- Mill Supplies.**
Appomattox Iron Works, Petersburg, Va.
Bailey-Lebby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Gainesville Iron Works, Gainesville, Ga.
Greenwald Co., I. & E., Cincinnati, O.
Lombard Iron Works, Augusta, Ga.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Mecklenburg Iron Works, Charlotte, N. C.
Nurdyke & Marmon Co., Indianapolis, Ind.
Salem Foundry & Machine Works, Salem, Va.
Smith-Courtney Co., Richmond, Va.
Starr Co., B. F., Baltimore, Md.
Stratton & Bragg Co., Petersburg, Va.
Wolf Co., Chambersburg, Pa.
- Mining Machinery. (Gold, Copper, Plate, etc.)**
Bartlett & Snow Co., C. O., Cleveland, O.
Jeffrey Mfg. Co., Columbus, O.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Mecklenburg Iron Works, Charlotte, N. C.
Nashville Armature Works, Nashville, Tenn.
Power & Mining Machinery Co., Cudahy, Wis.
Raymond Bros. Impact Pulp Co., Chicago, Ill.
- Mixing Machinery.**
Dunning, W. D., Syracuse, N. Y.
Lynn Superior Co., The, Cincinnati, O.
- Mold. (Cement.)**
Simpson Cement Mold Co., Columbus, O.
- Mortar Colors.**
Chattanooga Paint Co., Chattanooga, Tenn.
- Mouldings, Casings, etc.**
Massee & Felton Lumber Co., Macon, Ga.
- Nails and Spikes.**
American Steel & Wire Co., Chicago, Ill.
Hoffman & Co., R. C., Baltimore, Md.
Lebanon Valley Iron & Steel Co., Lebanon, Pa.
Republic Iron & Steel Co., Youngstown, O.
West Virginia Rail Co., The, Huntington, W. Va.
Youngstown Sheet & Tube Co., Youngstown, O.
- Nitre Pots, Eggs.**
Pratt Engineering & Mach. Co., Atlanta, Ga.
- Nuts. (See Bolts, Nuts, Rivets, etc.)**
- Office Furniture.**
Quincy Show Case Works, Quincy, Ill.
Ruse & Thompson, Baltimore, Md.
- Oils. (Lubricating, etc.)**
Borne-Seymour Co., New York, N. Y.
Galea Signal Oil Co., Franklin, Pa.
Gulf Refining Co., Pittsburg, Pa.
Indian Refining Co., Cincinnati, O.
Robinson & Son Co., Wm. C., Baltimore, Md.
Texas Co., The, New York, N. Y.
- Oil-Burning Appliances.**
Ingram Fuel Oil Burner Co., Newport News, Va.
Petroleum Iron Works Co., Sharon, Pa.
- Oil Cans.**
Wall Mfg. Supply Co., P., Allegheny, Pa.
- Oil Separators.**
Stewart Heater Co., Buffalo, N. Y.
- Oil Stones.**
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.
- Oil-Storage Systems.**
Hydraulic Oil Storage Co. of Maryland, Baltimore, Md.
- Oil-Well Machinery.**
Keystone Steam Well Mach. Co., Beaver Falls, Pa.
Williams Bros., Ithaca, N. Y.
- Ornamental Iron Work.**
Belmont Iron Works, Inc., Philadelphia, Pa.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Chattanooga Iron & Wire Wks., Chattanooga, Tenn.
Cheasapeake Iron Works, Baltimore, Md.
Dow Wire Works Co., Louisville, Ky.
Ohio Elevator & Machine Co., The, Columbus, O.
Roanoke Iron Works, Inc., Roanoke, Va.
Schreiber & Sons Co., The, L., Cincinnati, O.
Snead Architectural Iron Works, Louisville, Ky.
Southern Wire & Iron Mfg. Co., Dallas, Tex.
- Packing. (Asbestos, Metallic, Rubber, Leather, etc.)**
Jenkins Bros., New York, N. Y.
Johns-Manville Co., H. W., New York, N. Y.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Power Specialty Co., New York, N. Y.
- Paint. (Bridge.)**
Detroit Graphite Co., Detroit, Mich.
Dixon Crucible Co., Jos., Jersey City, N. J.
Maryland Steel Co., Sparrows Point, Md.
National Roofing Co., Tonawanda, N. Y.
- Paints. (Cold Water.)**
Wilhelm Co., A., New York, N. Y.
- Paint. (Roofing, Building, etc.)**
Armstrong Mfg. Co., The, Richmond, Va.
Bird & Son, F. W., East Walpole, Mass.
Cameron & Barkley Co., Charleston, S. C.
Carolina Portland Cement Co., Charleston, S. C.
Chattanooga Paint Co., Chattanooga, Tenn.
Detroit Graphite Co., Detroit, Mich.
Dixon Crucible Co., Jos., Jersey City, N. J.
Glidden Varnish Co., Cleveland, O.
Maryland Steel Co., Sparrows Point, Md.
National Roofing Co., Tonawanda, N. Y.
Standard Paint Co., New York, N. Y.
Wilhelm Co., A., New York, N. Y.
- Paint. (Metal Preservative.)**
Detroit Graphite Co., Detroit, Mich.
Maryland Steel Co., Sparrows Point, Md.
National Roofing Co., Tonawanda, N. Y.
Wilhelm Co., A., New York, N. Y.
- Painting. (Contractors for Bridges, Buildings, etc.)**
Dinlaco & Bro., A., Pittsburg, Pa.
- Paint-making Machinery.**
Campbell, P. F., Philadelphia, Pa.
Lynn Superior Co., The, Cincinnati, O.
- Paper. (Roofing, Building, Sheathing, etc.)**
Armstrong Mfg. Co., The, Richmond, Va.
Barrett Mfg. Co., Philadelphia, Pa.
Berlin Mills Co., Portland, Maine.
Bird & Son, F. W., East Walpole, Mass.
Cameron & Barkley Co., Charleston, S. C.
Southeastern Lime & Cement Co., Charleston, S. C.
- Paraffine Wax.**
Standard Oil Co., Inc., Cincinnati, O.
- Paper. (Wrapping.)**
Berlin Mills Co., Portland, Maine.
- Patent Attorneys.**
Brown, Eugene C., Washington, D. C.
Chandler & Co., H. Ellis, Washington, D. C.
Chandler & Chandler, Washington, D. C.
Evans & Co., Victor J., Washington, D. C.
Hamlin, Geo. R., Washington, D. C.
Lacey, R. S. & A. B., Washington, D. C.
Owen, Richard B., Washington, D. C.
- Patterns.**
Roanoke Iron Works, Inc., Roanoke, Va.
- Pavement Filler.**
Barrett Mfg. Co., Philadelphia, Pa.
- Paving. (Contractors for Cressed Wood Block.)**
Cressed Wood Block Paving Co., Gulfport, Miss.
- Paving. (Road and Street, etc.)**
Barber Asphalt Paving Co., Philadelphia, Pa.
Southern Clay Mfg. Co., Chattanooga, Tenn.
- Paving Blocks. (Granite.)**
Harris Granite Quarries Co., Salisbury, N. C.
- Paving Blocks. (Wood Cress-Resinate.)**
Gulfport Cressed Wood Co., Gulfport, Miss.
Southern Wood Preserving Co., Atlanta, Ga.
U. S. Wood Preserving Co., New York, N. Y.
- Paving Brick.**
Carlyle Paving Brick Co., Portsmouth, O.
Copeland-Ingalls Shale Brick Co., Birm'g'm, Ala.
Southern Clay Mfg. Co., Chattanooga, Tenn.
- Perforated Metal.**
Caldwell & Son, H. W., Chicago, Ill.
Clinton Wire Cloth Co., Clinton, Mass.
Erdle Perforating Co., Rochester, N. Y.
Hendrick Mfg. Co., The, Carbondale, Pa.
Mundt & Sons, Charles, Jersey City, N. J.
- Perspectives. (Water Color, for Architects.)**
Alger & Smith, Atlanta, Ga.
- Petroleum Refiners.**
Gulf Refining Co., Philadelphia, Pa.
Indian Refining Co., Cincinnati, O.
Standard Oil Co., Cincinnati, O.
- Phosphate Machinery.**
Alding Engineering Co., J. R., New York, N. Y.
American Process Co., New York, N. Y.
Bailey-Lebby Co., The, Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Link-Belt Co., Nictown (Philadelphia), Pa.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Pratt Engineering & Mach. Co., Atlanta, Ga.
Raymond Bros. Impact Pulp Co., Chicago, Ill.
Vaik & Murdoch Iron Works, Charleston, S. C.
Walker & Elliott, Wilmington, Del.
- Phosphor-Bronze. (Wire Rods, Sheets.)**
Phosphor-Bronze Smelting Co., Philadelphia, Pa.
- Photo-Engravers.**
Baltimore Maryland Envg. Co., Baltimore, Md.
- Pig Iron.**
Alabama Coal & Iron Co., Birmingham, Ala.
Hammond-Hyrd Co., The, Birmingham, Ala.
Hickman, Williams & Co., Chicago, Ill.
The Belle Iron Works, Steubenville, O.
Republic Iron & Steel Co., Youngstown, O.
Rogers, Brown & Co., Cincinnati, O.
Tennessee Coal, Iron & R. R. Co., Birm'g'm, Ala.
- Pile Drivers.**
Browning Engineering Co., Cleveland, O.
Bucyrus Co., The, Milwaukee, Wis.
Vulcan Iron Works, Chicago, Ill.
- Piling. (Concrete.)**
Raymond Concrete Pile Co., New York, N. Y.
- Piling. (Cressed.)**
Gulfport Cressed Wood Co., Gulfport, Miss.
Internal Cressed Wood & Const. Co., Galveston, Tex.
Southern Cressed Wood Co., Ltd., Sillidell, La.
- Pillow Blocks.**
Caldwell Co., Inc., W. E., Louisville, Ky.
Dodge Manufacturing Co., Mishawaka, Ind.
Golden's Foundry & Machine Co., Columbus, Ga.
- Pine Tar.**
Atlantic Turpentine Co., Savannah, Ga.
- Pine. (Cast Iron.)**
American Cast Iron Pipe Co., Birmingham, Ala.
American Pipe & Construction Co., Phila., Pa.
General Fire Extinguisher Co., Providence, R. I.
Glasgow Pipe & Foundry Co., Lynchburg, Va.
McWane Pipe Works & Fdry. Co., New York, N. Y.
U. S. Cast Iron Pipe & Fdry. Co., New York, N. Y.
Wood & Co., R. D., Philadelphia, Pa.
- Pine. (Coil.)**
Columbus Iron Works Co., Columbus, Ga.
Frick Co., The, Waynesboro, Pa.
National Pipe Bending Co., New Haven, Conn.
Whitlock Coil Pipe Co., Hartford, Conn.
Wolf Co., Fred W., Chicago, Ill.
York Mfg. Co., York, Pa.
- Pine. (Corrugated Culvert.)**
American Rolling Mill Co., Middletown, O.
Canton Culvert Co., The, Canton, O.
Dixie Culvert & Metal Co., Atlanta, Ga.
Kentucky Culvert Mfg. Co., Buechel, Ky.
North Carolina Metal Culf. Co., Greensboro, N. C.
Virginia Metal Culvert Co., Roanoke, Va.
Virginia Railway Supply Co., Norfolk, Va.
- Pine. (Riveted.)**
Abendroth & Root Mfg. Co., Newburgh, N. Y.
Keeler Co., E., Williamsport, Pa.
Petroleum Iron Works Co., Sharon, Pa.
- Pine. (Spiral Riveted.)**
Abendroth & Root Mfg. Co., Newburgh, N. Y.
American Spiral Pipe Works, Chicago, Ill.
- Pine. (Wood.)**
Wyckoff & Son Co., A., Elmira, N. Y.
- Pine. (Wrought.)**
General Fire Extinguisher Co., Providence, R. I.
Hollie Iron Works, Steubenville, O.
National Tube Co., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.
- Pipe Bends.**
Columbus Iron Works Co., Columbus, Ga.
Whitlock Coil Pipe Co., Hartford, Conn.
- Pipe Covering. (Steam.)**
Johns-Manville Co., H. W., New York, N. Y.
Wyckoff & Son Co., A., Elmira, N. Y.
- Pipe Cutting and Threading Machinery.**
Saunders' Sons, D., Yonkers, N. Y.
- Pipe Fittings.**
American Cast Iron Pipe Co., Birmingham, Ala.
Columbus Iron Works Co., Columbus, Ga.
General Fire Extinguisher Co., Providence, R. I.
Wolf Co., Fred W., Chicago, Ill.
York Mfg. Co., York, Pa.
- Pipe Jointing. (Gas and Water Main.)**
Leadite Co., The, Philadelphia, Pa.
- Pipe Locator.**
Modern Iron Works, Quincy, Ill.
- Pipe Unions and Joints.**
Dart Mfg. Co., R. M., Providence, R. I.
National Tube Co., Pittsburgh, Pa.
Whitlock Coil Pipe Co., Hartford, Conn.
- Pipe Wrenches and Cutters.**
Saunders' Sons, D., Yonkers, N. Y.
- Pitch.**
Barrett Mfg. Co., Philadelphia, Pa.
- Planers. (Metal.)**
Manning, Maxwell & Moore, Inc., New York, N. Y.
- Planing Mill Work.**
Massee & Felton Lumber Co., Macon, Ga.
- Plaster of Paris.**
King & Co., J. B., New York, N. Y.
- Plaster.**
Security Cement & Lime Co., Baltimore, Md.
- Plaster. (Asbestos Cement, Plaster of Paris.)**
King & Co., J. B., New York, N. Y.
- Plaster Boards.**
King & Co., J. B., New York, N. Y.
Plaster Products Co., Hampton, Va.
- Plaster Machinery.**
Bartlett & Snow Co., C. O., Cleveland, O.
- Plates.**
Cincinnati Iron & Steel Co., Cincinnati, O.
- Pneumatic Tools. (See Tools—Pneumatic.)**
- Poles. (Transmission Line; Steel.)**
Ritter-Conley Mfg. Co., Pittsburg, Pa.
- Polishing Machinery. (Wheels and Blocks.)**
Abrasive Material Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Springfield Tire & Rubber Co., Springfield, O.
Vitrified Wheel Co., Westfield, Mass.
- Power Transmission Machinery.**
Bailey-Lebby Co., Charleston, S. C.
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Dayton Globe Iron Works Co., Dayton, O.
Dodge Manufacturing Co., Mishawaka, Ind.
Eclipse Wood Pulley Co., Inc., Berlin, Pa.
Golden's Foundry & Machine Co., Columbus, Ga.
Greenwald Co., I. & E., Cincinnati, O.
Jeffrey Mfg. Co., Columbus, O.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Lane Mfg. Co., Montpelier, Vt.
Link-Belt Co., Nictown (Philadelphia), Pa.
Morse Chain Co., Ithaca, N. Y.
Nurdyke & Marmon Co., Indianapolis, Ind.
Positive Engineering & Machine Co., Baltimore, Md.
Price Machinery Co., S. M., Norfolk, Va.
Schiefel's Sons Co., S. M., Macon, Ga.
Wood's Sons Co., T. B., Chambersburg, Pa.
- Presses. (Baling, Cottonseed Oil, etc., Hydraulic and Power.)**
Boomer & Bouchert Press Co., Syracuse, N. Y.
Cardwell Machine Co., Richmond, Va.
Continental Gin Co., Birmingham, Ala.
Gibbs Machinery Co., Columbia, S. C.
- Presses. (Stamping.)**
Bliss Co., E. W., Brooklyn, N. Y.
Ledger & Co., Charles, Brooklyn, N. Y.
- Preventive for Sap Stain.**
Church & Dwight Co., New York, N. Y.

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Steel Protected Concrete Co., Philadelphia, Pa.

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Caldwell Co., Inc., W. E., Louisville, Ky.
 Caldwell & Son Co., H. W., Chicago, Ill.
 Dodge Manufacturing Co., Mishawaka, Ind.
 Poole Engineering & Machine Co., Baltimore, Md.
 Positive Clutch & Pulley Works, Buffalo, N. Y.
 Stinchfield Co., Baltimore, Md.
 Woods' Sons Co., T. B., Chambersburg, Pa.

STEEL SPLIT.

American Pulley Co., Philadelphia, Pa.

Dodge Manufacturing Co., Mishawaka, Ind.

WOOD SPLIT.

Caldwell Co., Inc., W. E., Louisville, Ky.
 Caldwell & Son Co., H. W., Chicago, Ill.
 Dodge Manufacturing Co., Mishawaka, Ind.
 Eclipse Wood Pulley Co., Inc., Berlin, Pa.
 Lane Mfg. Co., Montpelier, Vt.
 Positive Clutch & Pulley Works, Buffalo, N. Y.
 Saginaw Mfg. Co., Saginaw, Mich.
 Salem Foundry & Machine Works, Salem, Va.

Pulleys, Shafting and Hangers.

Caldwell Co., Inc., W. E., Louisville, Ky.
 Caldwell & Son Co., H. W., Chicago, Ill.
 Dodge Manufacturing Co., Mishawaka, Ind.
 Eclipse Wood Pulley Co., Inc., Berlin, Pa.
 Golden's Foundry & Machine Co., Columbus, Ga.
 Greenwald Co., I. & E., Cincinnati, O.
 Jeffrey Mfg. Co., Columbus, O.
 Jones & Laughlin Steel Co., Pittsburgh, Pa.
 Lane Mfg. Co., Montpelier, Vt.
 Link-Belt Co., Detroit (Philadelphia), Pa.
 Nardley & Marmon Co., Indianapolis, Ind.
 Poole Engineering & Machine Co., Baltimore, Md.
 Positive Clutch & Pulley Works, Buffalo, N. Y.
 Standard Roller Bearing Co., Philadelphia, Pa.
 Woods' Sons Co., T. B., Chambersburg, Pa.

Pumps. (Centrifugal.)

Alberger Pump Co., New York, N. Y.
 Buffalo Steam Pump Co., Buffalo, N. Y.
 De Laval Steam Turbine Co., Trenton, N. J.
 Emerson Steam Pump Co., Alexandria, Va.
 Erie Pump & Engine Works, Erie, Pa.
 Goulds Mfg. Co., Seneca Falls, N. Y.
 Morris Machine Works, Baldwinville, N. Y.
 Wheeler Condenser & Eng. Co., New York, N. Y.
 Wood & Co., R. R., Philadelphia, Pa.
 Worthington, H. R., New York, N. Y.

Pumps. (Hydraulic.)

Buffalo Steam Pump Co., Buffalo, N. Y.
 Cardwell Machine Co., Richmond, Va.
 Dean Bros. Steam Pump Wks., Indianapolis, Ind.
 Emerson Steam Pump Co., Alexandria, Va.
 Erie Pump & Engine Works, Erie, Pa.
 Goulds Mfg. Co., Seneca Falls, N. Y.
 Worthington, H. R., New York, N. Y.

Pumps. (Lift and Force.)

Goulds Mfg. Co., Seneca Falls, N. Y.

Ingersoll-Rand Co., New York, N. Y.

Pumps. (Odorous and Excavating.)

Goulds Mfg. Co., Seneca Falls, N. Y.

Pumps. (Pneumatic.)

Ingersoll-Rand Co., New York, N. Y.

Pumps. (Power Boiler Feed.)

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 Cameron Steam Pump Wks., A. S., New York, N. Y.
 Dean Bros. Steam Pump Wks., Indianapolis, Ind.
 Goulds Mfg. Co., Seneca Falls, N. Y.
 McGowan Co., John H., Cincinnati, O.
 Moffatt Machinery Mfg. Co., Charlotte, N. C.
 Murray Iron Works Co., Burlington, Ia.
 Myers & Bros., F. E., Ashland, O.
 Union Steam Pump Co., Battle Creek, Mich.
 Worthington, H. R., New York, N. Y.

Pumps. (Rotary.)

Goulds Mfg. Co., Seneca Falls, N. Y.

McGowan Co., John H., Cincinnati, O.

Pumps. (Steam.)

Blakelee Mfg. Co., Du Quoin, Ill.
 Buffalo Steam Pump Co., Buffalo, N. Y.
 Cameron Steam Pump Wks., A. S., New York, N. Y.
 Cameron & Barkley Co., Charleston, S. C.
 Cook Well Co., The, St. Louis, Mo.
 Dean Bros. Steam Pump Wks., Indianapolis, Ind.
 Deane Steam Pump Co., Holyoke, Mass.
 Fairbanks, Morse & Co., Chicago, Ill.
 Gibbes Machinery Co., Columbia, S. C.
 Goulds Mfg. Co., Seneca Falls, N. Y.
 Hooven, Owen, Rentschler Co., Hamilton, O.
 Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
 McGowan Co., John H., Cincinnati, O.
 Murray Iron Works Co., Burlington, Ia.
 Price Machinery Co., S. M., Norfolk, Va.
 Sydnor Pump & Well Co., Richmond, Va.
 Union Steam Pump Co., Battle Creek, Mich.
 Wheeler Condenser & Eng. Co., New York, N. Y.
 Worthington, H. R., New York, N. Y.

Pumps. (Trench.)

Goulds Mfg. Co., Seneca Falls, N. Y.

Pumps. (Vacuum.)

Alberger Pump Co., New York, N. Y.
 Dean Bros. Steam Pump Wks., Indianapolis, Ind.
 Goulds Mfg. Co., Seneca Falls, N. Y.
 Union Steam Pump Co., Battle Creek, Mich.
 Wheeler Condenser & Eng. Co., New York, N. Y.

Pumping Machinery.

Allis-Chalmers Co., Milwaukee, Wis.
 Blakelee Mfg. Co., Du Quoin, Ill.
 Cameron Steam Pump Wks., A. S., New York, N. Y.
 Cook Well Co., The, St. Louis, Mo.
 Dean Bros. Steam Pump Wks., Indianapolis, Ind.
 Deane Steam Pump Co., Holyoke, Mass.
 Fairbanks, Morse & Co., Chicago, Ill.
 Gibbes Machinery Co., Columbia, S. C.
 Goulds Mfg. Co., Seneca Falls, N. Y.
 Hooven, Owen, Rentschler Co., Hamilton, O.
 Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
 Moffatt Machinery Mfg. Co., Charlotte, N. C.
 Morris Machine Works, Baldwinville, N. Y.
 Myers & Bros., F. E., Ashland, O.
 Purner, J. R., Charlotte, N. C.
 Sanitary Pump Co., Dayton, O.
 Sydnor Pump & Well Co., Richmond, Va.
 Union Steam Pump Co., Battle Creek, Mich.
 Wood & Co., R. R., Philadelphia, Pa.
 Worthington, H. R., New York, N. Y.

Punching and Shearing Machinery.

Bertsch & Co., Cambridge City, Ind.
 Bliss Co., E. W., Brooklyn, N. Y.
 Royersford Foundry & Mach. Co., Royersford, Pa.

Pyrites Burners.

Pratt Engineering & Mach. Co., Atlanta, Ga.

Quarrying and Stonecutting Machinery.

Ingersoll-Rand Co., New York, N. Y.

Railroads. (Agricultural and Industrial Opportunities.) [See Industrial, Agricultural and Commercial Opportunities.]**Railroads.** (Passenger Department.)

Illinois Central Railroad, Chicago, Ill.

Railroad Equipment and Supplies. (New and Second-hand.)

American Frog & Switch Co., Hamilton, O.
 American Locomotive Co., New York, N. Y.
 American Valve & Meter Co., Cincinnati, O.
 Bailey-Libby Co., The, Charleston, S. C.
 Baldwin Equipment & Supply Co., Chicago, Ill.
 Birmingham Rail & Loco. Co., Birmingham, Ala.
 Boston Iron & Metal Co., Baltimore, Md.
 Cincinnati Frog & Switch Co., Cincinnati, O.
 Fairbanks, Morse & Co., Chicago, Ill.
 Foster Co., L. B., Pittsburgh, Pa.
 Hoffman & Co., R. C., Baltimore, Md.
 Georgia Car & Locomotive Co., Atlanta, Ga.
 Indiana Steel & Iron Co., Pittsburgh, Pa.
 Kilby Frog & Switch Co., Birmingham, Ala.
 Macleary, J. H., Suffolk, Va.
 Males Co., Cincinnati, O.
 Manning, Maxwell & Moore, Inc., New York, N. Y.
 Maryland Equipment & Supply Co., Baltimore, Md.
 May & Turner Co., Atlanta, Ga.
 National Iron & Steel Co., Houston, Tex.
 Newhall Eng. Co., Geo. M., Philadelphia, Pa.
 Pickett, H. W., Philadelphia, Pa.
 Reed Co., Howard W., Philadelphia, Pa.
 Robinson & Orr, Pittsburgh, Pa.
 Sherwood, E. C., New York, N. Y.
 Smith-Courtney Co., Richmond, Va.
 Southern Iron & Equipment Co., Atlanta, Ga.
 Southern Supply Co., Norfolk, Va.
 Steel Rail Supply Co., The, New York, N. Y.
 United States Rail Co., Cumberland, Md.
 Vulcan Iron Works, Wilkes-Barre, Pa.
 Weir Frog Co., Cincinnati, O.
 West Virginia Rail Co., The, Huntington, W. Va.
 Wilson & Co., E. H., Philadelphia, Pa.
 Zehleker Supply Co., Walter A., St. Louis, Mo.

Railroad Frogs and Switches.

American Frog & Switch Co., Hamilton, O.
 Cincinnati Frog & Switch Co., Cincinnati, O.
 Hoffman & Co., R. C., Baltimore, Md.
 Kilby Frog & Switch Co., Birmingham, Ala.
 May & Turner Co., Atlanta, Ga.
 Robinson & Orr, Pittsburgh, Pa.
 Sweet's Steel Co., Williamsport, Pa.
 Weir Frog Co., Cincinnati, O.

Rails. (Steel.)

Baldwin Equipment & Supply Co., Chicago, Ill.
 Carnegie Steel Co., Pittsburgh, Pa.
 Foster Co., L. B., Pittsburgh, Pa.
 Franks, J. E., Atlanta, Ga.
 Hoffman & Co., R. C., Baltimore, Md.
 Hunt Co., C. W., West New Brighton, N. Y.
 Hyde Bros. & Co., Pittsburgh, Pa.
 Indiana Steel & Iron Co., Pittsburgh, Pa.
 Lewis & Co., Henry, Philadelphia, Pa.
 Macleary, J. H., Suffolk, Va.
 May & Turner Co., Atlanta, Ga.
 National Iron & Steel Co., Houston, Tex.
 Newhall Eng. Co., Geo. M., Philadelphia, Pa.
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 Sherwood, E. C., New York, N. Y.
 Southern Iron & Equipment Co., Atlanta, Ga.
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 Sweet's Steel Co., Williamsport, Pa.
 Tennessee Coal, Iron & R. R. Co., B'ham, Ala.
 United States Rail Co., Cumberland, Md.
 West Virginia Rail Co., The, Huntington, W. Va.
 Wilson & Co., E. H., Philadelphia, Pa.
 Zehleker Supply Co., Walter A., St. Louis, Mo.

Rail Braces, Crossings, etc. [See R. R. Frogs and Switches.]**Railways.** (Industrial.)

Chase Fdry. & Mfg. Co., Columbus, O.
 Hunt Co., C. W., West New Brighton, N. Y.
 Link-Belt Co., Skietown (Philadelphia), Pa.

Rams. (Hydraulic.) [See Hydraulic Rams.]**Reamers.**

Morse Twist Drill & Mch. Co., New Bedford, Mass.

Reinforcing Bars.

Carnegie Steel Co., Pittsburgh, Pa.
 Concrete Steel Co., New York, N. Y.
 Concrete Steel Engineering Co., New York, N. Y.
 Franklin Steel Co., Franklin, Pa.

Repairing. (Armatures and Elec. App.)

Nashville Armature Works, Nashville, Tenn.

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Road Machinery.

Austin-Western Co., Ltd., The, Chicago, Ill.
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 Iroquois Iron Works, Buffalo, N. Y.
 Kelly Springfield Road Roller Co., Springfield, O.
 Kilbourne & Jacobs Mfg. Co., Columbus, O.
 Syracuse Chilled Plow Co., Syracuse, N. Y.
 Universal Road Mch. Co., Kingston, N. Y.

Road Oil.

Gulf Refining Co., Pittsburgh, Pa.
 Standard Oil Co., Inc., Road Oil Dept.
 Texas Co., The, New York, N. Y.

Road Plows.

Case Threshing Mach. Co., J. I., Racine, Wis.
 Syracuse Chilled Plow Co., Syracuse, N. Y.

Road Preservative.

Gulf Refining Co., Pittsburgh, Pa.
 Standard Oil Co., Inc., Road Oil Dept.
 Texas Co., The, New York, N. Y.

Rock Crushers. [See Crushers, Rock.]

Veatch & Co., L. R., Louisville, Ky.
 Veatch & Co., L. R., Louisville, Ky.

Rolls. (Bending and Straightening.)

Bertsch & Co., Cambridge City, Ind.

Roofers' and Tinners' Supplies.

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 American Sheet & Tin Plate Co., Pittsburgh, Pa.
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 Barber Asphalt Paving Co., Philadelphia, Pa.
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 Cameron & Barkley Co., Charleston, S. C.

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 National Roofing Co., Tonawanda, N. Y.
 Standard Paint Co., New York, N. Y.
 Warren-Eliet Co., Philadelphia, Pa.

Roofing. (Cement.)

Carey Mfg. Co., Philip, Cincinnati, O.

Roofing. (Metal Shingles.) [See Shingles, Metal.]

Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
 Cortright Metal Roofing Co., Philadelphia, Pa.
 Edwards Mfg. Co., The, Cincinnati, O.
 Milwaukee Corrugating Co., Milwaukee, Wis.

Roofing. (Reinforced Concrete.)

Clinton Wire Cloth Co., Clinton, Mass.

Roofing. (Slate.)

East Bangor Consol. Slate Co., East Bangor, Pa.
 Galt & Sons, John, New York, N. Y.
 Genuine Bangor Slate Co., Easton, Pa.
 Hower, J. K., Stratford, Conn.
 Johnson, E. J., New York, N. Y.

Roofing and Siding. (Bird Sand and Chipped Slate Surfaced.)

Birmingham & Seaman Co., Chicago, Ill.

Roofing and Siding. (Flexible Cement, Bur- ing Inserted.)

Birmingham & Seaman Co., Chicago, Ill.

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 American Sheet & Tin Plate Co., Pittsburgh, Pa.
 Cameron & Barkley Co., Charleston, S. C.
 Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
 Cortright Metal Roofing Co., Philadelphia, Pa.
 Edwards Mfg. Co., The, Cincinnati, O.
 Hyndman Roofing Co., Cincinnati, O.
 Milwaukee Corrugating Co., Milwaukee, Wis.
 New Orleans Rfg. & Metal Wks., New Orleans, La.
 Tennessee Metal Culvert Co., Nashville, Tenn.
 Youngstown Sheet & Tube Co., Youngstown, O.

Rope.

American Mfg. Co., New York, N. Y.
 Broderick & Hanson Rope Co., St. Louis, Mo.
 Columbus Cordage Co., Auburn, N. Y.
 Plymouth Cordage Co., North Plymouth, Mass.
 Turner Co., J. Spencer, New York, N. Y.
 Whitlock Cordage Co., New York, N. Y.

Rope. (Transmission and Hoisting.)

American Mfg. Co., New York, N. Y.
 American Steel & Wire Co., Chicago, Ill.
 Broderick & Hanson Rope Co., St. Louis, Mo.
 Columbus Cordage Co., Auburn, N. Y.
 Dodge Manufacturing Co., Mishawaka, Ind.
 Hunt Co., C. W., West New Brighton, N. Y.
 Plymouth Cordage Co., North Plymouth, Mass.
 Whitlock Cordage Co., New York, N. Y.
 Wood's Sons Co., T. B., Chambersburg, Pa.

Rope Drives.

Caldwell Co., Inc., W. E., Louisville, Ky.
 Caldwell & Son, H. W., Chicago, Ill.
 Dodge Manufacturing Co., Mishawaka, Ind.
 Jones & Laughlin Steel Co., Pittsburgh, Pa.
 Wood's Sons Co., T. B., Chambersburg, Pa.

Rope Machinery.

Haskell-Dawes Machine Co., Boston, Mass.

Rubber Goods.

Eureka Fire Hose Mfg. Co., New York, N. Y.

New Jersey Car Sp'g & Rub. Co., Jersey City, N. J.

Rules. (Steel.)

Larkin Rule Co., The, Saginaw, Mich.
 Starratt Co., L. S., Athol, Mass.

Safes and Vaults.

York Safe & Lock Co., York, Pa.

Safety Appliances. (For Elevator.)

Roth Elevator Safety Co., Inc., Baltimore, Md.

Sand.

Arundel Sand & Gravel Co., Baltimore, Md.

Cassels Concrete Gravel Co., Augusta, Ga.

Kirkpatrick Sand & Gravel Co., Hurdsville, Ala.

Southern Sand & Gravel Co., Richmond, Va.

Sand Lime Brick Machinery.

American Clay Machinery Co., The, Bucyrus, O.

Sand Rammers.

Chicago Pneumatic Tool Co., Chicago, Ill.

Sap Stain Preventive.

Church & Dwight Co., New York, N. Y.

Sash Chain.

Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.

Saws.

Gibbes Machinery Co., Columbia, S. C.

Hutter Bros. Saw Mfg. Co., Rochester, N. Y.

Smith Machine Co., H. B., Smithville, N. J.

Sydnor Pump & Well Co., Richmond, Va.

Saws. (Band.)

Smith Machine Co., H. B., Smithville, N. J.

Saws. (Hack.)

Starratt Co., L. S., Athol, Mass.

Sawmill Dogs.

Soule Steam Feed Works, Meridian, Miss.

Sawmills.

Appomattox Iron Works, Petersburg, Va.

Gainesville Iron Works, Gainesville, Ga.

Vance & Co., J. A., Salem, N. C.

Sawmill Machinery.

Bailey-Libby Co., Charleston, S. C.

Cameron & Barkley Co., Charleston, S. C.

Chase Turbine Mfg. Co., Orange, Mass.

Gibbes Machinery Co., Columbia, S. C.

Knight Mfg. Co., Canton, O.

Lane Mfg. Co., Montpelier, Vt.

Mechlenburg Iron Works, Charlotte, N. C.

Price Mch. Co., S. M., Macon, Ga.

Schnefeld's Sons Co., J. S., Macon, Ga.

Southern Engine & Boiler Works, Jackson, Tenn.

Sydnor Pump & Well Co., Richmond, Va.

Union Iron Works Co., Selma, Ala.

Vance & Co., J. A., Salem, N. C.

Saw Sharpeners.

Abrasive Material Co., Philadelphia, Pa.

Carborundum Co., Niagara Falls, N. Y.

Norton Co., Worcester, Mass.

Vitrified Wheel Co., Westfield, Mass.

Saw Sharpeners and Files. (Cotton Gln.)

Carver Cotton Gln Co., East Bridgewater, Mass.

Scales.

Howe Scale Co., New York, N. Y.

Home Sec. & Mfg. Co., Rome, Ga.

Standard Scale & Supply Co., Pittsburgh, Pa.

Screening Apparatus.

Walker & Elliott, Wilmington, Del.

Screens. (Fly, Window and Door.)

New Jersey Wire Cloth Co., Trenton, N. J.

Screens. (Mining.)

Clinton Wire Cloth Co., Clinton, Mass.
 Erdle Perforating Co., Rochester, N. Y.
 Hendrick Mfg. Co., Carlisle, Pa.
 Jeffrey Mfg. Co., Columbus, O.
 New Jersey Wire Cloth Co., Trenton, N. J.
 Mundt & Sons, Charles, Jersey City, N. J.
 McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
 Symons Bros., Milwaukee, Wis.

Searchlights.

Ft. Wayne Electric Works, Ft. Wayne, Ind.

Separators. (Dust.)

Buffalo Forge Co., Buffalo, N. Y.
 Raymond Bros. Impact Pulv. Co., Chicago, Ill.
 Savannah Blow Pipe Co., Savannah, Ga.
 Skinner Bros., St. Louis, Mo.

Sewer Pipe Machinery.

American Clay Machinery Co., The, Bucyrus, O.

Sewer Pipe. (Vitrified.)

Carolina Portland Cement Co., Charleston, S. C.
 Pomona Terra-Cotta Co., Pomona, N. C.
 Stevens Sons Co., H., Macon, Ga.

Shafting. (Polished Steel.)

Field & Co., Inc., Philadelphia, Pa.
 Jones & Laughlin Steel Co., Pittsburgh, Pa.
 Republic Iron & Steel Co., Youngstown, O.

Shafting Boxes.

Hyatt Roller Bearing Co., Newark, N. J.

Shafting. (See Pulleys, Shafting and Hangers.)**Sharpening Stones.**

Norton Co., Worcester, Mass.

Vitrified Wheel Co

Stapling Machinery. (Fruit Package Basket, etc.)

Saranac Machine Co., St. Joseph, Mich.

Stationers. (Envelopes, etc.)

Young & Selden Co., Baltimore, Md.

Steam Feeds.

Boyle Steam Feed Works, Meridian, Miss.

Steam Fitters' Supplies.

General Fire Extinguisher Co., Providence, R. I.

Saunders' Sons, D., Yonkers, N. Y.

Steam Heating.

General Fire Extinguisher Co., Providence, R. I.

Peck-Hammond Co., The, Cincinnati, O.

Steamship Lines.

Baltimore Steam Packet Co., Baltimore, Md.

Chesapeake Steamship Co., Baltimore, Md.

Merchant & Miners' Trans. Co., Baltimore, Md.

Steam Separators.

Hoppe Mfg. Co., Springfield, O.

Lindstrom's Mach. Wks., John T., Allentown, Pa.

Steam Shovel Chains.

Werner Chain & Iron Co., Lebanon, Pa.

Steam Shovels. [See Excavating Machinery.]

Steam Shovels. (Revolving.)

Browning Engineering Co., Cleveland, O.

Steam Specialties.

Powell Co., Wm., Cincinnati, O.

Purser, J. R., Charlotte, N. C.

Steam Traps.

American Blower Co., Detroit, Mich.

Jenkins Bros., New York, N. Y.

Lindstrom's Mach. Wks., John T., Allentown, Pa.

Steel.

American Rolling Mill Co., Middletown, O.

Carnegie Steel Co., Pittsburgh, Pa.

Field & Co., Inc., Philadelphia, Pa.

Hoffman & Co., R. C., Baltimore, Md.

Jones & Laughlin Steel Co., Pittsburgh, Pa.

Lebanon Valley Iron & Steel Co., Lebanon, Pa.

La Belle Iron Works, Steubenville, O.

Republic Iron & Steel Co., Youngstown, O.

Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.

Wood Iron & Steel Co., Alan, Philadelphia, Pa.

Steels. (Tool.)

Field & Co., Inc., Philadelphia, Pa.

Jessup Sons Steel Sales Co., Wm., St. Louis, Mo.

Steel. (Vanadium.)

American Vanadium Co., Pittsburgh, Pa.

Carnegie Steel Co., Pittsburgh, Pa.

Steel Buildings. (Designers, Builders.)

American Bridge Co. of New York, New York, N. Y.

Baltimore Bridge Co., Baltimore, Md.

Bartlett-Hayward Co., The, Baltimore, Md.

Chesapeake Iron Works, Baltimore, Md.

Chicago Bridge & Iron Wks., Chicago, Ill.

Farris Bridge Co., The, Cincinnati, O.

Missouri Valley Bridge & Iron Co., Leavenworth, Kans.

Phoenix Iron Co., Philadelphia, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Ronoake Bridge Co., Ronoake, Va.

Schreiber & Sons Co., The, Cincinnati, O.

Shad Architectural Iron Works, Louisville, Ky.

Virginia Bridge & Iron Co., Ronoake, Va.

Steel Casting.

Crescent Steel Castings Co., Lansdowne, Pa.

Hoffman & Co., R. C., Baltimore, Md.

Illiance Steel Casting Co., Pittsburgh, Pa.

Reside Steel Casting Co., Newark, N. J.

Steel Plate Work.

Bartlett-Hayward Co., The, Baltimore, Md.

Casey-Hedges Co., Chattanooga, Tenn.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Chicago Bridge & Iron Wks., Chicago, Ill.

Hoffman & Co., R. C., Baltimore, Md.

Phoenix Iron Co., Philadelphia, Pa.

Republic Iron & Steel Co., Youngstown, O.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Steel Protector. (Concrete Curb Steps, etc.)

[See Protector Steel.]

Steel Sheet Piling.

Carnegie Steel Co., Pittsburgh, Pa.

Jones & Laughlin Steel Co., Pittsburgh, Pa.

Steering Gears. (Steamboat.)

Duke Engine Co., Grand Haven, Mich.

Stencils.

Baltimore Office Supply Co., Baltimore, Md.

Dixie Seal & Stamp Co., Atlanta, Ga.

Stirrups. (Building.)

Chesapeake Iron Works, Baltimore, Md.

Stock Certificates, Bonds and Seals.

Baltimore Office Supply Co., Baltimore, Md.

Dixie Seal & Stamp Co., Atlanta, Ga.

Stokers. (Mechanical.)

Babcock & Wilcox Co., New York, N. Y.

Harrisburg Fdry. & Mach. Works, Harrisburg, Pa.

Westinghouse Machine Co., Pittsburgh, Pa.

Storage Batteries.

Lee Electric Co., Baltimore, Md.

Elec. Storage Battery Co., The, Philadelphia, Pa.

Westinghouse Machine Co., Pittsburgh, Pa.

Strainers.

Cameron Steam Pump Wks., A. S., New York, N. Y.

Structural Steel and Iron.

American Bridge Co. of New York, New York, N. Y.

Baltimore Bridge Co., Baltimore, Md.

Bartlett-Hayward Co., The, Baltimore, Md.

Belmont Iron Works, Inc., Philadelphia, Pa.

Carnegie Steel Co., Pittsburgh, Pa.

Chesapeake Iron Works, Baltimore, Md.

Chicago Bridge & Iron Wks., Chicago, Ill.

Cincinnati Iron & Steel Co., Cincinnati, O.

Des Moines Bridge & Iron Co., Des Moines, Ia.

Hoffman & Co., R. C., Baltimore, Md.

Jones & Laughlin Steel Co., Pittsburgh, Pa.

Missouri Valley Bridge & Iron Co., Leavenworth, Kans.

Owego Bridge Co., Owego, N. Y.

Phoenix Iron Co., Philadelphia, Pa.

Republic Iron & Steel Co., Youngstown, O.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Ronoake Bridge Co., Ronoake, Va.

Ronoake Iron Works, Inc., Ronoake, Va.

Schreiber & Sons Co., The, Cincinnati, O.

Shad Architectural Iron Works, Louisville, Ky.

Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.

Vincennes Bridge Co., Vincennes, Ind.

Virginia Bridge & Iron Co., Ronoake, Va.

York Bridge Co., York, Pa.

Stump Pullers.

Zimmerman Steel Co., M. R., Lone Tree, Ia.

Sugar-Mill Machinery.

Pratt Engineering & Mach. Co., Atlanta, Ga.

Sulphur.

Union Sulphur Co., New York, N. Y.

Super-Heaters. (Steam.)

Babcock & Wilcox Co., New York, N. Y.

Power Specialty Co., New York, N. Y.

Surveying Instruments.

Keuffel & Esser, Hoboken, N. J.

Switchboards, Switches, etc.

Doubliday-Hill Electric Co., Pittsburgh, Pa.

Engberg's Elect. & Mech. Works, St. Joseph, Mo.

Fort Wayne Electric Works, Atlanta, Ga.

General Electric Co., Schenectady, N. Y.

Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.

Switches. [See Railroad Frogs and Switches.]

Switchstands.

American Valve & Meter Co., Cincinnati, O.

Weir Frog Co., Cincinnati, O.

Tackle Blocks. (For Wire or Manila Rope.)

Patterson Co., W. W., Pittsburgh, Pa.

Tags.

Dennison Mfg. Co., Boston, Mass.

Tanks. (Iron and Steel.)

American Water Softener Co., Philadelphia, Pa.

Bartlett-Hayward Co., The, Baltimore, Md.

Caldwell Co., Inc., W. E., Louisville, Ky.

Case Threshing Mach. Co., J. I., Racine, Wis.

Casey-Hedges Co., Chattanooga, Tenn.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Chicago Bridge & Iron Wks., Chicago, Ill.

Cole Mfg. Co., R. D., Newnan, Ga.

Des Moines Bridge & Iron Co., Des Moines, Ia.

Harry Bros. Co., Dallas, Tex.

Harley Boiler Works, Montgomery, Ala.

Keeler Co., E., Williamsport, Pa.

Keuffel & Esser, Hoboken, N. J.

Lebanon Valley Iron Works, Lebanon, Pa.

Lookout Boiler & Mfg. Co., Chattanooga, Tenn.

New Orleans Rfr. & Metal Wks., New Orleans, La.

Petroleum Iron Works Co., Sharon, Pa.

Ritter-Conley Mfg. Co., Pittsburgh, Pa.

Seafie & Sons Co., Wm. B., Pittsburgh, Pa.

Schofield's Sons Co., J. S., Macon, Ga.

Snyder Pump & Well Co., Richmond, Va.

Tennessee Metal Culvert Co., Nashville, Tenn.

Virginia Bridge & Iron Co., Ronoake, Va.

Walsh & Weidner Boiler Co., Chattanooga, Tenn.

Tanks. (Wood.)

Baltimore Cooperage Co., Baltimore, Md.

Caldwell Co., Inc., W. E., Louisville, Ky.

Davis & Son, G. M., Palatka, Fla.

Snyder Pump & Well Co., Richmond, Va.

Tapes. (Measuring.)

Keuffel & Esser, Hoboken, N. J.

Larkin Rule Co., Saginaw, Mich.

Starrett Co., L. S., Athol, Mass.

Telephones. (Supplies, Equipment.)

Doubliday-Hill Electric Co., Pittsburgh, Pa.

Edmund Electric Co., Asheville, N. C.

Western Electric Co., New York, N. Y.

Telephone Cable.

Western Electric Co., New York, N. Y.

Telephone Poles. [See Cross-ties.]

Western Electric Co., New York, N. Y.

Terra-cotta.

Atlanta Terra-Cotta Co., East Point, Ga.

Birley, Chas. & R. O., Atlanta, Ga.

Maryland Terra-Cotta Co., Baltimore, Md.

Pomona Terra-Cotta Co., Pomona, N. C.

Southern Building Material Co., Norfolk, Va.

Stevens' Sons Co., H., Macon, Ga.

Threshers.

Cardwell Machine Co., Richmond, Va.

Case Threshing Mach. Co., J. I., Racine, Wis.

Tie Plates. (Railways.)

Virginia Railway Supply Co., Norfolk, Va.

Tile. (Drain, Floor, etc.)

Amer. Enam. Brick & Tile Co., New York, N. Y.

Oconee Brick & Tile Co., Milledgeville, Ga.

Tile. (Mosaic.)

Dagostin & Angelini Bros., Montgomery, Ala.

Southern Mosaic Tile Co., Birmingham, Ala.

Tin and Terne Plates.

American Sheet & Tin Plate Co., Pittsburgh, Pa.

Merchant & Evans Co., Philadelphia, Pa.

Tobacco Machinery.

Buckeye Iron & Brass Works, Dayton, O.

Cardwell Machine Co., Richmond, Va.

Tool Steels.

Jessup's Sons Steel Sales Co., Wm., St. Louis, Mo.

Tools. (Machinists.)

Manning, Maxwell & Moore, Inc., New York, N. Y.

Morse Twist Drill & Mach. Co., New Bedford, Mass.

Tools. (Mechanical.)

Starrett Co., L. S., Athol, Mass.

Tools. (Pneumatic.)

American Compressor & Pump Co., Baltimore, Md.

Chicago Pneumatic Tool Co., Chicago, Ill.

Independent Pneumatic Tool Co., Chicago, Ill.

Ingersoll-Rand Co., New York, N. Y.

Torches.

Wall Mfg. Supply Co., P., Allegheny, Pa.

Towers. (Steel and Wood.)

Baltimore Cooperage Co., Baltimore, Md.

Caldwell Co., Inc., Wm. E., Louisville, Ky.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Chicago Bridge & Iron Wks., Chicago, Ill.

Cole Mfg. Co., R. D., Newnan, Ga.

Des Moines Bridge & Iron Co., Des Moines, Ia.

Traction Engines.

Case Threshing Mach. Co., J. I., Racine, Wis.

Tramway. (Overhead.)

Northern Engineering Works, Detroit, Mich.

Speldel, J. G., Reading, Pa.

Tramway. (Wire Rope.)

Broderick & Bascom Rope Co., St. Louis, Mo.

Caldwell & Sons Co., H. W., Chicago, Ill.

Link-Belt Co., Nictown (Philadelphia), Pa.

Transformers.

Crocker-Wheeler Co., Amper, N. J.

Moloney Electric Co., St. Louis, Mo.

Triumph Electric Co., Cincinnati, O.

Trench Excavator.

American Steel Dredge Co., Ft. Wayne, Ind.

Fairbanks Steam Shovel Co., Marion, O.

Monaghan Machine Co., Chicago, Ill.

Trucks. (Platform, Freight, Mill, Factory, etc.)

Clark Co., Geo. P., Windsor Locks, Conn.

Abraham & Root Mfg. Co.,	11	Carnegie Steel Co.,	24	Fleet-McGinley Co.,	101	* Kilson Machine Shop,	101	Otis Elevator Co.,	21	Southern Wire & Iron Mfg.	101
Abraham Material Co.,	11	Carnell, George,	24	Florida Coast Line C. & O. R.	100	Kline, Lewis T.,	100	Owens Bridge Co.,	30	Southern Wood Preserving Co.,	101
Acme Knitting Machine & Needle Co.,	8	Carolina Barytes Co.,	81	T. A. Co.,	74	Knights Mfg. Co.,	99	Owner Bucket Co.,	32	Southark Fdy. & Mch. Co.,	101
Adams & Adams,	79	Carolina, Clinchfield & Ohio Railway Co.,	104	Florida Trust Co.,	63	Knowles, Morris,	22	Painter, Thos. A.,	33	Spies, J. G.,	101
Alabama Cons. Coal & Iron Co.,	28	Carroll Portland Cement Co.,	25	Flory Mfg. Co.,	89	Kosmos, L. A. H.,	22	Patton Mfg. Co.,	33	Spies, J. G.,	101
Alberger Condenser Co.,	13	Carver Cotton Gin Co.,	3	Forch Chain Block & Mfg. Co.,	8	Kosmos Portland Cement Co.,	26	Patterson & Davidson,	22	Spies, J. G.,	101
Alberger Pump Co.,	13	Cary Spring Works,	42	Forster Co., L. B.,	84	Roschell Bros. Ice Mch. Co.,	43	Patterson Co., The,	22	Spiker, William C.,	101
Alderson Co., A. D.,	12	Cass Threshing Mch. Co., J. L.,	31	Foster-Creighton-Gould Co.,	23	La Belle Iron Works,	84	Patterson Co., W. C.,	22	Sprague Canning Mch. Co.,	101
Alger & Smith, Co.,	22	Cass Portland Cement Co.,	25	Fox, Fred J.,	93	Lacey, W. D.,	48	Patterson Co., The,	22	Sprague Tire & Rubber Co.,	101
Allegany Steel Co.,	12	Chattanooga Portland Cement Co.,	103	Frank & Son, Ernest T.,	82	Lane Mfg. Co.,	98	Patterson & Davidson,	22	Standard Blower & Metal Mfg. Co.,	101
Allen, Herbert F. L.,	14	Chattanooga Portland Cement Co.,	103	Franklin Steel Co.,	25	Layman, E. F.,	22	Patterson Co., W. C.,	22	Standard Cross Tie Mch. Co.,	101
Allis-Chalmers Co.,	14	Chamber of Commerce, Fayetteville, N. C.,	103	Frank, J. E.,	84	Leahman, Chas. T.,	82	Patterson Co., W. C.,	22	Standard Oil Co., Inc.,	101
Alpha Portland Cement Co.,	30	Chase Foundry & Mfg. Co.,	85	Frank, J. E.,	84	Lebanon Valley Iron & Steel Co.,	85	Patterson Co., W. C.,	22	Standard Paint Co.,	101
Alumina Co. of America,	31	Chase Turbine Mfg. Co.,	39	Fraser Lines,	106	Lehigh Portland Cement Co.,	26	Patterson Co., W. C.,	22	Standard Roller Bldg. Co.,	101
Amburns Hydraulic Construction Co.,	90	Chattanooga Boiler & Tank Co.,	39	Freuchling & Robertson,	22	Lehigh Portland Cement Co.,	26	Patterson Co., W. C.,	22	Standard Scale & Sup. Co.,	101
American Bridge Co. of New York,	101	Chattanooga Portland Cement Co.,	103	Galeneville Iron Works,	8	Lehigh Portland Cement Co.,	26	Patterson Co., W. C.,	22	Starr Co. B. F.,	101
American Cast Iron Pipe Co.,	30	Chattanooga Portland Cement Co.,	103	Galeneville Iron Works,	8	Lehigh Portland Cement Co.,	26	Patterson Co., W. C.,	22	Starr Co. B. F.,	101
American Cement Co.,	30	Chattanooga Portland Cement Co.,	103	Galeneville Iron Works,	8	Lehigh Portland Cement Co.,	26	Patterson Co., W. C.,	22	Starr Co. B. F.,	101
American Compressor & Pump Co.,	101	Chattanooga Portland Cement Co.,	103	Galeneville Iron Works,	8	Lehigh Portland Cement Co.,	26	Patterson Co., W. C.,	22	Starr Co. B. F.,	101
American Cotton Oil Co.,	101	Chattanooga Portland Cement Co.,	103	Galeneville Iron Works,	8	Lehigh Portland Cement Co.,	26	Patterson Co., W. C.,	22	Starr Co. B. F.,	101
Amer. Enam. Brick & Tile Co.,	33	Chattanooga Portland Cement Co.,	103	Galeneville Iron Works,	8	Lehigh Portland Cement Co.,	26	Patterson Co., W. C.,	22	Starr Co. B. F.,	101
American Enam. Brick & Tile Co.,	33	Chattanooga Portland Cement Co.,	103	Galeneville Iron Works,	8	Lehigh Portland Cement Co.,	26	Patterson Co., W. C.,	22	Starr Co. B. F.,	101
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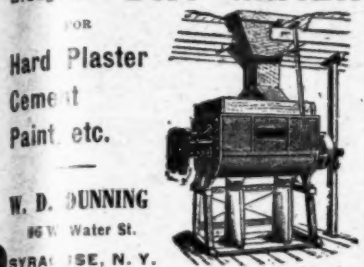
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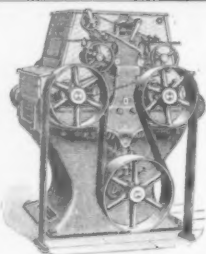
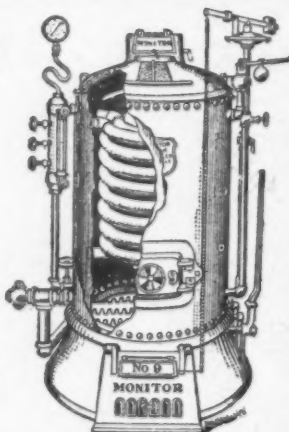
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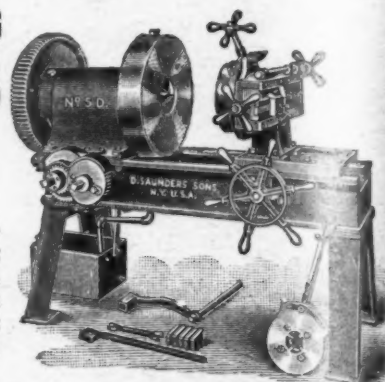
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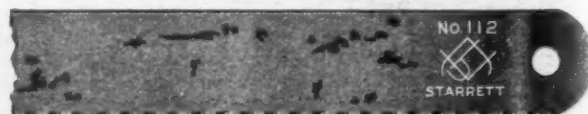
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